

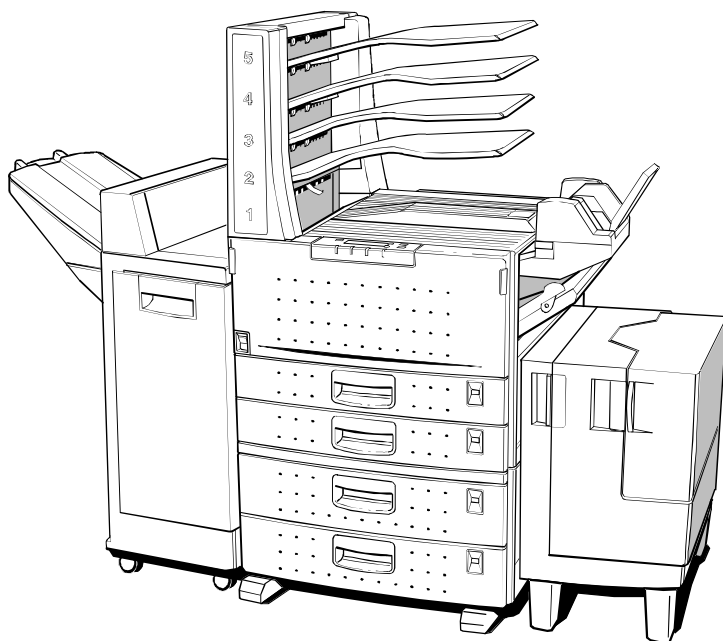
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# Aficio

# MP01

**RICOH**

## Printer Reference



## Operating Instructions

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Read this manual carefully before you use this product and keep it handy for future reference. For safety, please follow the instructions in this manual.

## INTRODUCTION

This manual contains detailed instructions on the operation and maintenance of this machine. To get maximum versatility from this machine, all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Please read the Safety Information in the Printer Reference before using this machine. It contains Important Information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.



As an Energy Star Partner, we have determined that this printer model meets Energy Star Guidelines for energy efficiency.

For good print quality, Ricoh recommends that you use genuine Ricoh toner.

Ricoh shall not be responsible for any damage or expense that may result from the use of parts other than genuine Ricoh parts in your Ricoh office product.

**Note:** Some illustrations may be slightly different from your machine.

**Note:** Certain options may not be available in some countries. For details, please contact your local dealer.

## Important

Parts of this manual are subject to change without prior notice.

In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

## Trademarks

Microsoft®, Windows®, and MS-DOS® are registered trademarks of Microsoft Corporation in the United States and/or other countries. PostScript® is registered trademark of Adobe System Incorporated.

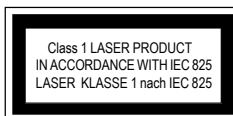
Other product names used herein are for identification purposes only and might be trademarks of their respective companies. We disclaim any and all rights in those marks.

## Operator Safety:

This machine is considered a CDRH Class 1 laser device, safe for office/EDP use. The machine contains a 5-milliwatt, 760 to 800 nanometer wavelength, GaAlAs laser diode. Direct (or indirect reflected) eye contact with the laser beam may cause serious eye damage. Safety precautions and interlock mechanisms have been designed to prevent any possible laser beam exposure to the operator.

The following label is attached on the machine.

This label can be found when opening the By-pass Tray.



## Laser Safety:


The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optional units in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the field. Customer engineers are therefore directed to return all chassis and laser subsystems to the factory or service depot when replacement of the optical subsystem is required.


## Warning:

Use of controls or adjustment or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.



## SAFETY INFORMATION



When using your machine, the following safety precautions should always be followed.

 **WARNING:** *Ignoring this warning could cause serious injury or even death.*






 **CAUTION:** *Ignoring this caution could cause injury or damage to property.*



 **Symbols  means a situation that requires you take care.**

 **Do NOT carry out the operation represented by the symbol .** *This example means “Do not take apart.”*

 **Symbols  means you MUST perform this operation . This example means “You must remove the wall plug.”**








## WARNINGS:

	<ul style="list-style-type: none"> <li>• Only connect the machine to the power source described in the Important Information Section.</li> <li>• Avoid multi-wiring.</li> <li>• Do not damage , break or make any modifications to the power cord. Do not place heavy objects on it, pull it hard or bend it more than necessary. These actions could cause an electric shock or fire.</li> <li>• Do not plug or unplug the power cord with your hands wet. Otherwise, an electric shock might occur.</li> </ul>
	<ul style="list-style-type: none"> <li>• Make sure the wall outlet is near the machine and freely accessible so that in event of an emergency it can be unplugged easily.</li> </ul>
	<ul style="list-style-type: none"> <li>• Do not remove any covers or screws other than those specified in this manual. Some parts of the machine are at a high voltage and could give you an electric shock. When the machine needs to be checked, adjusted, or repaired, contact your service representative.</li> <li>• Do not take apart or attempt any modifications to this machine. There is a risk of fire, electric shock, explosion or loss of sight.</li> </ul>
	<ul style="list-style-type: none"> <li>• If the machine looks damaged or breaks down, smoke is coming out, there is a strange smell or anything looks unusual, immediately turn off the power switch then unplug the power cord from the wall. Do not continue using the machine in this condition. Contact your service representative.</li> <li>• If metal, liquid or foreign matter falls into the machine, turn off the power switch, and unplug the power cord. Contact your service representative. Do not keep using the machine with a fault or defect.</li> </ul>
	<ul style="list-style-type: none"> <li>• Do not put any metal objects or containers holding water (e.g.vases, flowerpots, glasses) on the machine. If the contents fall inside the machine, a fire or electric shock could occur.</li> </ul>

	<ul style="list-style-type: none"><li>• <i>Do not incinerate used toner or toner containers. Toner dust might ignite when exposed to an open flame. Dispose of the used toner containers according to local regulations for plastics.</i></li></ul>
	<ul style="list-style-type: none"><li>• <i>Do not incinerate the photoconductor unit. Toner dust might ignite when exposed to open flame. Dispose of the used photoconductor unit according to local regulations for plastics.</i></li></ul>


## CAUTIONS:


---

	<ul style="list-style-type: none"><li>• Keep the machine away from humidity and dust. A fire or an electric shock might occur.</li><li>• Do not place the machine on an unstable or tilted surface. If it topples over, it could cause injury.</li></ul>
	<ul style="list-style-type: none"><li>• When you move the machine, unplug the power cord from the wall outlet to avoid fire or electric shock.</li><li>• When the machine dose not be used for a long time, unplug the power cord.</li></ul>
	<ul style="list-style-type: none"><li>• When you pull out the plug from the socket, grip the plug to avoid damaging the cord and causing fire or electric shock.</li></ul>
	<ul style="list-style-type: none"><li>• If you use the machine in a confined space, make sure there is a continuous air turnover.</li></ul>
	<ul style="list-style-type: none"><li>• Do not reuse stapled paper. Do not use aluminum foil, carboncontaining paper or other conductive paper. Otherwise, a fire might occur.</li></ul>
	<ul style="list-style-type: none"><li>• When removing misfed paper, do not touch the fusing section because it could be very hot.</li></ul>
	<ul style="list-style-type: none"><li>• This machine has been tested for safety using this supplier's parts and consumables. We recommend you only use these specified supplies.</li></ul>



## SAFETY INFORMATION



When using your machine, the following safety precautions should always be followed.

 **WARNING:** *Ignoring this warning could cause serious injury or even death.*






 **CAUTION:** *Ignoring this caution could cause injury or damage to property.*

 **Symbols**  *means a situation that requires you take care.*



 **Do NOT** carry out the operation represented by the symbol . This example means “Do not take apart.”

 **Symbols**  *means you MUST perform this operation . This example means “You must remove the wall plug.”*

## WARNINGS:



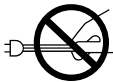




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	<ul style="list-style-type: none"> <li>• Do not put any metal objects or containers holding water (e.g.vases, flowerpots, glasses) on the machine. If the contents fall inside the machine, a fire or electric shock could occur.</li> </ul>



	<ul style="list-style-type: none"><li>• <i>Do not incinerate used toner or toner containers. Toner dust might ignite when exposed to an open flame. Dispose of the used toner containers according to local regulations for plastics.</i></li></ul>
	<ul style="list-style-type: none"><li>• <i>Do not incinerate the photoconductor unit. Toner dust might ignite when exposed to open flame. Dispose of the used photoconductor unit according to local regulations for plastics.</i></li></ul>

## CAUTIONS:

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# OVERVIEW

## Manuals for this Machine

We have three manuals that describe the operational procedures separately for the operation and maintenance of the machine, the operation of Printer Driver/Utility <PCL and TIFF> and the operation of Printer Driver/Utility <PostScript®-option>.

This manual contains detailed instructions on the operation and maintenance of the machine. To ensure safe and efficient operation of the machine, all users should read and follow the instructions contained in this manual.

### Printer Reference (this manual)

Describes the operational procedures and functions to use the machine.

### Printer Driver/Utility Reference <PCL and TIFF>

Describes the operational procedures and functions to use PCL and TIFF driver.

### Printer Driver/Utility Reference <PostScript®-option>

Describes the operational procedures and functions to use PostScript® (option) driver.

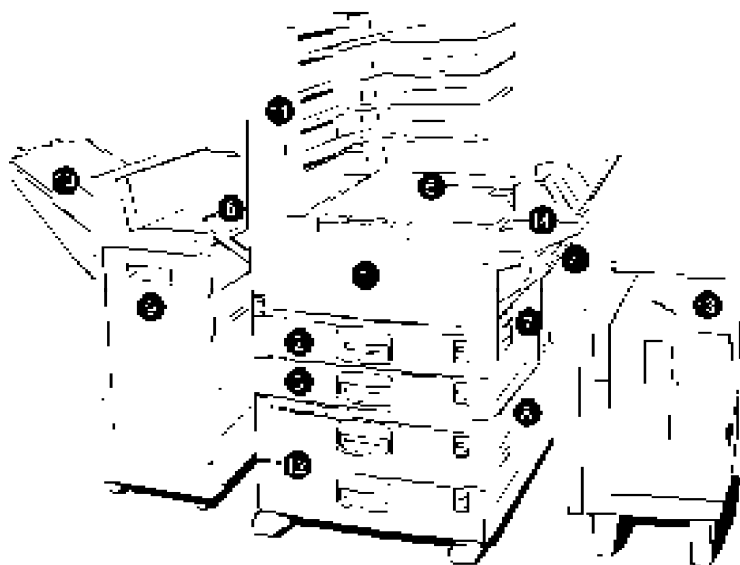
## System Overview

This machine provides letter or A4 paper size output at 25 pages per minute (ppm). Standard output resolution is 600 dots per inch (dpi), with 300dpi emulation available. An Adobe® PostScript® option is available that also supports 400dpi resolution. The printer can handle various paper sizes from A6 up to A3 or 11" x 17" format. It can also print on custom paper sizes and envelopes.

Available output features include a four-bin Mailbox; a Finisher that provides face-up and face-down printing, job separation, and stapling; duplex printing; and disk-based collation. The input options include a Large Capacity Tray, Envelope Feeder and a two tray Paper Bank.

Figure 1-1 shows the printer with available optional accessories.

Figure 1-1. Machine with accessories



- |                          |                      |                         |
|--------------------------|----------------------|-------------------------|
| 1. Printer (Front Cover) | 6. External Tray     | 11. Mailbox             |
| 2. Tray 1                | 7. Right Cover       | 12. Paper Bank          |
| 3. Tray 2                | 8. Right Lower Cover | 13. Large Capacity Tray |
| 4. By-pass Tray          | 9. Finisher          | 14. Envelope Feeder     |
| 5. Standard Output Tray  | 10. Shift Tray       |                         |

## OVERVIEW

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The following optional equipment are available with the printer:

- ❑ Large Capacity Tray (LCT)
- ❑ Duplex Tray (replaces Tray 1)
- ❑ Finisher (replaces the External Tray)
- ❑ Envelope Feeder (replaces the By-pass Tray)
- ❑ Mailbox (the Standard Tray becomes Tray 1)

The printer is provided with PCL5e printer drivers for Windows 3.1 and Windows 95. TIFF printer drivers for Windows 3.1 and Windows 95 are also included. PostScript® printer drivers for Windows 3.1, Windows 95, and Macintosh are available with the PostScript® option.

The base dynamic random access memory (DRAM) of 8 megabytes (MB) provided with the printer allows simplex printing up to A3 or Ledger paper size. The printer supports the standard 46 PCL5e fonts, (35 scaleable fonts equivalent to the PCL5e font set), 10 TrueType fonts, and 1 bitmapped font. The printer also supports 35 Postscript® Type 1 fonts when the printer is equipped with the PostScript® option.

A hard disk option is available, which provides support for PostScript® soft font and forms image storage and temporary storage of print data as required for printing collated sets of multiple page documents, referred to as disk-based collation.

The printer is connected to a host computer or network through either a standard bi-directional parallel interface or an optional Ethernet or Token Ring Network Interface Card (NIC).

The optional NIC provides connectivity to any network-connected work-station through an Ethernet or Token Ring network.



## Features

The following are some of the standard features of this machine:

- ❑ 11" x 17" or A3 maximum paper size, using the paper trays.
- ❑ 297 x 432 mm (11.69" x 17.00") maximum image size, using the By-pass Tray.
- ❑ High quality laser print output at 600 dpi. 400 dpi resolution is available when the PostScript® option is installed. The printer can emulate 300 dpi resolution by doubling the pixel size at 600 dpi.
- ❑ Support for PCL5e and TIFF printer languages.
- ❑ A bi-directional parallel port for connection to systems running Windows 3.1, or Windows 95.
- ❑ 46 PCL5e fonts that include 35 scaleable fonts equivalent to the PCL5e Intellifont font set, 10 TrueType fonts and 1 bitmapped font.
- ❑ Output speed of up to 25 pages/minute (ppm), for Letter or A4 paper fed on the long edge.
- ❑ Two 250-sheet input trays and a 100-sheet By-pass Tray.
- ❑ A 400-sheet Standard Output Tray and a 100-sheet External Tray.
- ❑ Halftoning, which uses a dithering process to improve the appearance of gray tones.
- ❑ Edge Smoothing, which produces output emulating 1200 dpi.
- ❑ Toner Saving mode.
- ❑ Energy Saver mode.

## Options

The following are options that you can add to enhance the basic capabilities of the printer:

- ❑ **PostScript® option** - The PostScript® option provides Adobe PostScript® Level II, including 35 PostScript® Type 1 scalable fonts. The PostScript® option includes a rasterizer for TrueType fonts that allows you to download TrueType fonts as soft fonts. The PostScript® option is provided on a PostScript® ROM Dual Inline Memory Module (DIMM) that you install in the PostScript® ROM DIMM socket on the printer controller.
- ❑ **Hard Disk option** - To provide for additional permanent PostScript® soft font storage and disk-based collation, you can add the hard disk to the printer. The disk is partitioned with the half of the capacity for PostScript® fonts and forms storage and the remaining capacity for temporary internal storage for disk-based collation when the PostScript® option is installed. Without the PostScript® option, all of storage capacity is used for disk-based collation.
- ❑ **Input Tray options** - The optional input trays include a 100-capacity Envelope Feeder, a 1,500-sheet Large Capacity Tray, and a Paper Bank consisting of two 500-sheet input trays.
- ❑ **Output options** - The output options include a Finisher, which performs job separation and stapling, a Duplex Tray, and a four-bin Mailbox.
- ❑ **Network Interface Card (NIC)** - NIC unit is available for Ethernet or Token Ring network. Protocols that can run concurrently include IPX/SPX (Novell NetWare), TCP/IP and AppleTalk for Macintosh.
  - ➡ Refer to the “NIC Personality Submenu” in this manual for more information.
- ❑ **Memory expansion (supplied by you)** - The printer is configured with eight megabytes (MB) DRAM. You can add DRAM Single Inline Memory Modules (SIMM) in the two available DRAM SIMM sockets. The DRAM SIMM sockets accept modules of 4 MB, 8MB, 16 MB, or 32 MB. You can add up to 64 MB of additional DRAM for a maximum system total of 68 MB of DRAM. Additional memory allows the printer to process print data at a faster rate and to store additional rasterized fonts or downloaded font data.

## Using this Manual

This manual explains how to set up and use this machine. This section contains a list of the contents of this manual, conventions used, and various publications that can be of further use to you.

## Contents

This manual contains the following chapters:

- ❑ **Chapter 1: SETTING UP** - basic information on setup and connection to a host computer or network
- ❑ **Chapter 2: USING THE CONTROL PANEL** - how to use the buttons and menus on the Control Panel
- ❑ **Chapter 3: MAINTAINING THE PRINTER** - basic maintenance procedures
- ❑ **Chapter 4: USING THE OPTIONS** - overview of how to use the optional hardware and software accessories
- ❑ **Chapter 5: TROUBLESHOOTING** - information on how to handle output quality problems, paper misfeeds, network problems, and software problems
- ❑ **Chapter 6: SPECIFICATIONS** - hardware specifications, interface specifications

An index is provided at the end of this manual.

### Conventions

The following conventions are used throughout this manual:

**Square brackets** - The names of the function keys on the printer Control Panel are shown in square brackets. For example, the **[Esc.]** key.

**Angle brackets** - The variable information that displays in a message or protocol statement is shown in angle brackets. For example, "Add Paper <tray number>".

**Italics** - The names of documents are shown in italics. For example, *Network Printer Server User Guide*.

☞ This symbol indicates that the following text refers to other sections and chapters containing further information about a topic.

**Note:** *In general, "Note" provides additional information important to help you complete a task or further understand the text.*

⚠ **CAUTION:** *In general, "Caution" provides information in preventing damage to your equipment, or in avoiding a situation that can cause minor injury to you.*

⚠ **WARNING:** *In general, "Warning" provides information important in alerting you to a situation that can cause serious injury to you and major damage to your equipment and property when instructions are not followed correctly.*

🔥 This symbol displays to notify you that the component can be very hot and should not be touched.

## Related Documents

*Printer Driver/Utility Reference <PCL and TIFF > Operating Instructions*

*Printer Driver/Utility Reference <PostScript®- option> Operating Instructions*

*Network Printer Server User Guide* (supplied with the optional NIC unit)

*PostScript® Language Reference Manual, Second Edition*, Adobe Systems Inc.  
Published by Addison Wesley Publishing Co. (ISBN 0-201-18127-4)

*PostScript® Language Reference Manual Supplement for Version 2015*, Adobe System, Inc.

*PCL5 Comparison Guide, Edition 1 (10/96)*, HP Part No. 5021-0329, Hewlett Packard Company

*PCL5 Printer Language Technical Reference Manual*, HP Part No. 33459-90903, Hewlett Packard Company

*Printer Job Language Technical Reference Manual Edition 9 (10/96)*, HP Part No. 5021-0328, Hewlett Packard Company

*HP LaserJet 4si User's Reference Manual, First Edition, 1993*, HP Part No C2010-90901. Hewlett Packard Company

# 1. SETTING UP

## REQUIREMENTS

Before using this machine you must make sure that you have met all of the environmental and electrical requirements. You must also connect the machine to your host computer using the parallel port, optional network interface card (NIC), or both. Make sure that you have all of the cables, connectors, and electrical outlets necessary to attach the machine to your host computer or network.

☛ Refer to the “Connecting to the Host Computer” in this chapter for further information on using the parallel port.

☛ Refer to the “Using the Options” chapter in this manual for information on using the NIC to connect to a network.

### Environmental Requirements

The location of the machine is important, because environmental conditions can greatly affect its performance. Keep the following in mind when setting up the machine:

- ❑ Make sure you set up the machine in an easily accessible area where the temperature ranges between 10 - 32°C (50 - 90°F), and where relative humidity is 20 - 80 %. The location should be no higher than 2000 m (6600 feet) above sea level.
- ❑ Make sure to locate the machine in a well-ventilated room with good air circulation.
- ❑ Make sure that the machine is on a sturdy, level surface with a minimum free area of 750 mm (29.6") above the machine, 20 mm (1") on each side when the trays and covers are open. There should also be 130 mm (5") clearance in rear and a comfortable working area in front of the machine. The area where you install the machine should be subject to little or no vibration.

- ❑ Locate the machine in an area subjected to little dust, and keep the machine out of direct sunlight.
- ❑ Keep users from placing any items on top of the machine.
- ⚠ **CAUTION:** *Do not locate the machine directly below an air conditioning or heating vent. Sudden temperature changes can cause condensation in the machine.*

## Electrical Requirements

Keep the following in mind when connecting your machine to an electrical outlet:

- ❑ The machine requires a power source of 120V, 60 Hz, more than 9A. In Europe, power requirements are 220V to 240V, 50 Hz, more than 4.5A.
- ❑ Make sure that your wall outlet is close to the machine and is easily accessible. Also make sure outlet accepts a three-prong plug. When a three-prong plug is not available, replace the outlet with the one that has a three-prong plug.
- ❑ Make sure that the voltage does not fluctuate more than 10 per cent at any time and avoid multiwiring.
- ❑ Make sure the power cord plug of the machine is firmly inserted in the outlet.
- ❑ Do not place anything on top of the power cord.

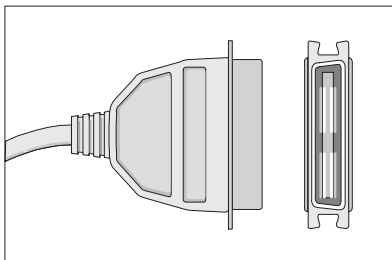


## Parallel Cable Requirements

You connect the machine to your host computer using a parallel port. It is your responsibility to provide the cable necessary for the interface you want to use to connect to your host computer. This cable is not provided with the machine.

The machine's parallel connection is a standard bi-directional parallel interface. It requires a standard 36-pin parallel cable compliant with IEEE 1284 and a parallel port available on the host computer.

**Note:** *Do not use a parallel cable longer than 3 meters (10 feet).*



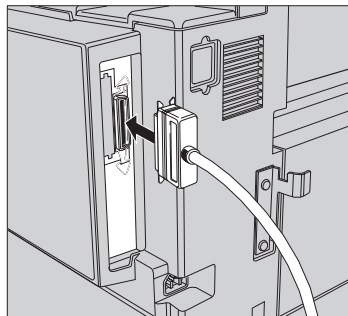
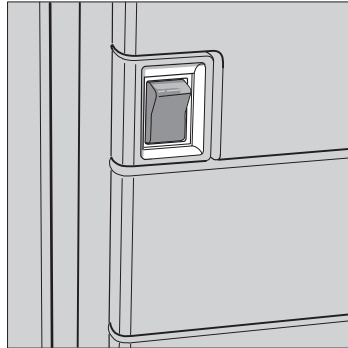
# CONNECTING TO THE HOST COMPUTER

Connect the machine to your host computer using a parallel cable compliant with IEEE 1284 (supplied by you ).

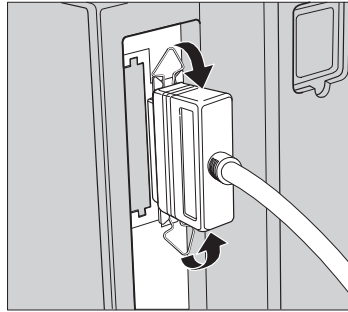
## Connecting the Parallel Cable

Follow these steps to connect the machine to your host computer:

- 1** Make sure you have the correct cable.
- 2** Make sure both the machine and your host computer are turned off.
- 3** Plug the 36-pin end of the parallel cable into the parallel port on the left side of the controller cover on the back of the machine.



- 4** Squeeze the wire clips on each side of the connector together until they snap into place. The clips hold the cable securely in place.



- 5** Plug the end of the parallel cable into the computer's parallel port.

## INSTALLING DRIVERS

When you have connected the machine to your host computer, you must install the appropriate printer drivers to enable your applications to communicate with the machine.

The machine is provided with diskettes that contain PCL and TIFF printer driver software for Windows 3.1, Windows 95.

☛ Refer to the “Printer Driver/Utility Reference <PCL and TIFF>” for detailed information on setting up and using the standard PCL and TIFF printer drivers.

Optional PostScript® printer drivers are also available for Windows 3.1, Windows 95, and Macintosh.

☛ Refer to the “Printer Driver/Utility Reference <PostScript®-option>” for more information on setting up and using the optional PostScript® printer drivers.

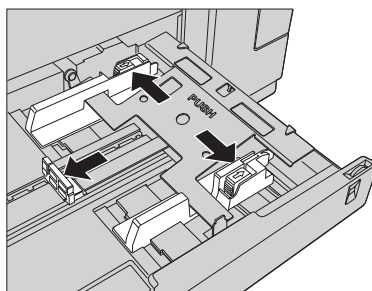
## LOADING PAPER

Follow these steps to load paper into standard input trays 1 and 2.

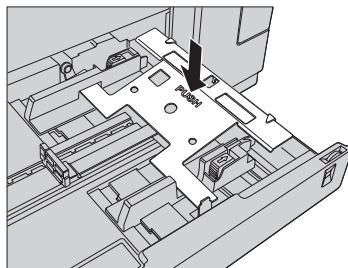
☛ Refer to the “Using the Options” chapter in this manual for instructions on how to load paper in the optional large capacity tray (LCT), Paper Bank, and Envelope Feeder.

**1** Pull out the paper tray using the recessed handle.

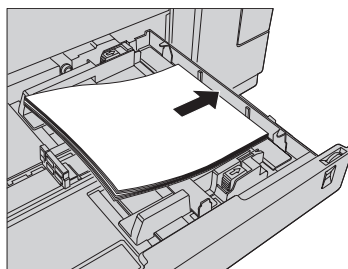
**2** Move the green paper guides to the edges of the paper tray.



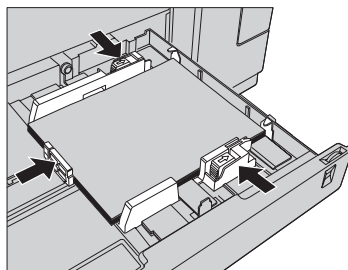
- 3 Press down on the gray metal pressure plate until it locks into position at the bottom of the tray.



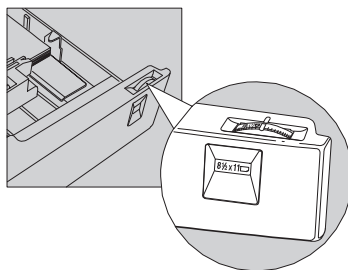
- 4 Fan a stack of paper no larger than 250 sheets, and place it in the tray. Make sure to place the paper in the tray with the printing side face down. The paper package indicates the printing side.










- 5 Position the paper guides against the stack of paper.



- 6 Set the paper size selection dial on the right edge of the tray to match the size and orientation of the paper you placed in the tray. The following sizes are shown on the dial.



- ☐ A3 
- ☐ F 
- ☐ Letter 11" x 8½" 
- ☐ Letter 8½" x 11" 

- ☐ A4 
- ☐ A4 
- ☐ A5 

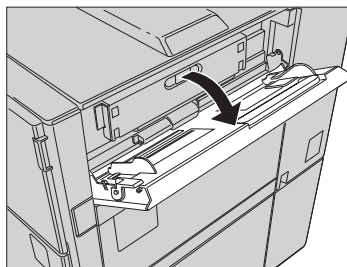
- 7** If you want to load a paper size not shown in the list of step 6, set the dial to “✖”. When the paper size dial is set to “✖”, you must enter the special paper size information using the printer Control Panel.  
➔ Refer to the “Using Control Panel” chapter in this manual for instructions on how to enter paper sizes using the Paper Input submenu of the Job Control menu.
- 8** Close the paper tray. The pressure plate rises into position, moving the stack of paper to the top of the tray.

**Note:** If the paper size you selected using the paper size selection dial or the Control Panel does not match the size of paper in the tray, and the printer attempts to print from this tray, the “Paper Size Error Tray <tray number>” message displays on the Control Panel. To correct the error, you must place the correct paper size in the tray and press the [ #/↵ ] key to continue printing.

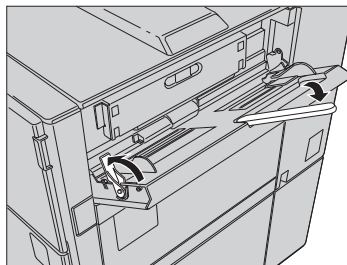
## Using the By-pass Tray

Follow these steps to print a job using the By-pass Tray:

- 1** Open the By-pass Tray door on the right side of the machine.



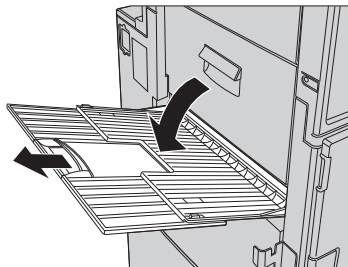
- 2** Raise the green lever on the left side of the By-pass Tray, and extend the paper support.



- 3** Fan a stack of paper no thicker than 10 mm (0.4"), and place it in the tray. Make sure to place the paper in the tray with the printing side face up. The paper package indicates the printing side. You can also place a stack of up to ten envelopes in the By-pass Tray.

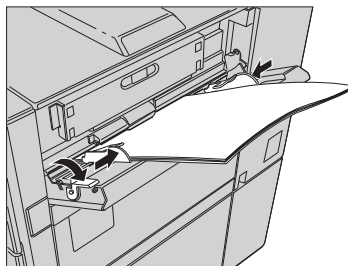
- 4** When you use heavy paper, transparencies, labels, or envelopes, you must open the External Tray or specify the output destination as "Shift Tray Face-up" using your application, your printer driver, or the printer Control Panel.

**Note:** *The Sift Tray is available only when the optional Finisher is installed.*



- 5** Position the paper guides against the stack of paper.

- ☞ When printing envelopes, refer to the "Using the Envelope Feeder" in this manual.



- 6** Lower the green lever on the left side of the By-pass Tray to position the paper stack.
- 7** Using the Control Panel, enter the size of the paper you placed in the By-pass Tray. ☞ Refer to the "Using the Control Panel" chapter in this manual for information on how to enter paper sizes.
- 8** Print your job. Output is delivered to the output tray you selected using your application or the printer driver.

**Note:** *When you close the By-pass Tray, position the paper guides outside.*

## TESTING

After you load paper, you can test the machine using the Test menu available from the Control Panel.

Follow these steps to access the Test menu:

- 1** Make sure the [↻] and [▶] indicator lights are lit.
- 2** Press the [▶] key so the [▶] indicator turns off. This indicates you are in the Menu mode.
- 3** Press the [▲] key until “Test/Print” appears on the display, then press the [#/↵] key
- 4** Press the [▲] key until “System Config” appears on the display, then press the [#/↵] key to print the Configuration Page, listing information about the machine system and configuration.
- 5** After printing the page, the printer will return to the On Line mode and display “Ready”.
- 6** Check the Configuration Page for your settings.

☞ Refer to the “Using the Control Panel” chapter in this manual for further information on configuring the machine and testing the printing capabilities.



## 2. USING THE CONTROL PANEL

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## CONTROL PANEL FUNCTIONS

This chapter describes how you use the main keys and the Control Panel menus to configure and use this machine.

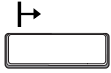
**Note:** *In general, you can provide most of the printer control settings using the application (the word processor, spreadsheet software, and so forth) from which you are printing. Almost all software application settings override the Control Panel settings you specify.*

**Figure 2-1. Control Panel**

1. The Control Panel indicates the current status of the printer, and provides a means of entering control information into the printer. It consists of a two-line, 16-column alphanumeric display, five function keys, and four light emitting diode (LED) indicators.
2. You can use the Control Panel to specify information such as the default input paper source you want to use, and how you want the printed output to look. You can also use it to print test sheets and error logs.

## Using the Function Keys

You use the function keys to enter Menu mode and to navigate among the different menus and submenus.



When you press the [→] key while the printer is in On Line mode, the printer enters Menu mode and the On Line LED indicator turns off.

When you press the [→] key while the printer is in Menu mode, the printer returns to On Line mode and the On Line LED turns on.

When you press the [→] key while the printer is processing or printing a job, a message displays "Press Escape to cancel this job". Pressing the [→] key again causes the printer to enter Menu mode and printing stops. You can restart the job by pressing the [→] key. Pressing the [Esc.] key causes the printer to abort the job.



When you press the [↑] key while the printer is in Menu mode, the display moves to the next selection at the same menu level.

When you hold down the [↑] key, you can cycle through the selections more quickly.



When you press the [↓] key while the printer is in Menu mode, the display moves to the previous selection at the same menu level.

When you hold down the [↓] key, you can cycle through the selections more quickly.

#/↵



When you press the [ #/↵ ] key while the printer is in Menu mode, the display accesses the next (lower) menu level.

When you are in the selection level or bottom level in a menu, you press the [ #/↵ ] key to activate the selection displayed on the Display. When the selection is made, a small arrow appears to the left of the selected item in the display.

You also use the [ #/↵ ] key when a Paper Size Error occurs. After loading the correct paper size, press the [ #/↵ ] key to continue printing.

Esc.



When you press the [Esc.] key while the printer is in Menu mode, the display accesses the previous (higher) menu level.

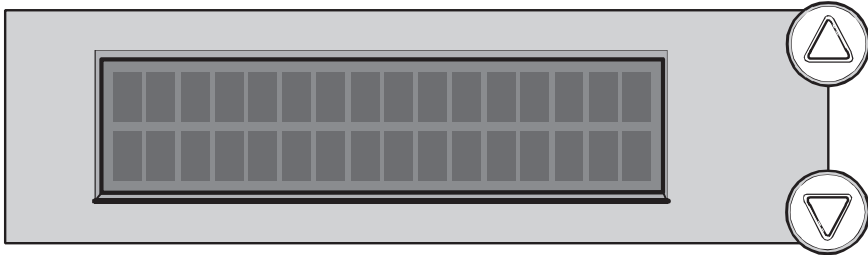
When the printer does not have a requested paper size, it displays "Load <paper-size>". You can press the [Esc.] key to ignore the paper size request. The printer continues printing from the default tray, ignoring the specified paper tray.


To abort the current print job, press the [↵] key, and then the [Esc.] key. The printer stops printing and cancels the remainder of the current job.

## Using the Display

The Display shows messages about the current status of print jobs as well as general configuration and condition messages. It also displays menus that you use to make printer configuration and print job selections.

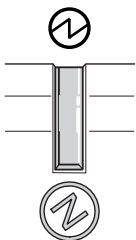
Figure 2-2. Display



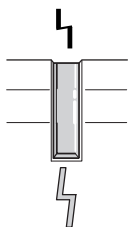
When you first turn on the printer, it is in On Line mode. The Display first shows the "Self Test" message, the "Initializing" message, and then the "Warming Up" message. When the printer is ready to operate, the "Ready" message displays.  Refer to the "Troubleshooting" chapter in this manual for more information on Control Panel messages.

## Using the LED Indicators

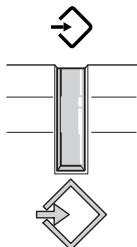
The four LED indicators on the Control Panel provide information on printer status, as follows:



- ☐ **Lit** - indicates the printer power is on.
- ☐ **Off** - indicates the printer power is off.

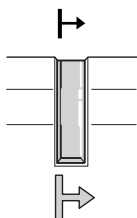


- ❑ **Lit** - indicates the printer is unable to print because of an operator or printer error.
- ❑ **Off** - indicates the printer has no error conditions.



- ❑ **Lit** - indicates the printer has data remaining in the buffer, waiting to print.
- ❑ **Blinking** - indicates the printer is busy processing a job or printing.
- ❑ **Off** - indicates the printer is not processing data, and is idle.

**Note:** When printing a PCL5e job and no “End of File” character is received, the printer will stop with this light on.



- ❑ **Lit** - indicates the printer is in On Line mode.
- ❑ **Off** - indicates the printer is in Menu mode.

---

## MAIN MENUS

The four main menus that you can access using the Control Panel are as follows:

- ❑ **Job Control menu**
- ❑ **Host Interface menu**
- ❑ **Language menu**
- ❑ **Test/Print menu**

Figure 2-3 shows the structure of the Control Panel menus and submenus.

**Figure 2-3. Control Panel menu structure**

## USING THE JOB CONTROL MENU

To access the Job Control menu, press the [↵] key to enter Menu mode. Press the [▲] key or the [▼] key until “Job Control Menu” displays. The Job Control menu contains the following submenus:

- ❑ **Paper Input**
- ❑ **Paper Output**
- ❑ **System**
- ❑ **PCL5 Menu**
- ❑ **Menu Reset**

### Paper Input Submenu

From the Job Control menu, press the [ #/↵ ] key and press the [▲] key or the [▼] key until “Paper Input” displays on the Control Panel. You use this submenu to specify the input paper source.

The Paper Input submenu contains the following selections:

- ❑ **Tray Priority**
- ❑ **Envelope Size**
- ❑ **By-pass Size**
- ❑ **Tray Size{}**

### Tray Priority Selection

You use this selection to specify the default input tray you want the printer to use. The options are as follows:

- ❑ **Tray 1**
- ❑ **LCT**
- ❑ **Tray 2**
- ❑ **Envelope Feeder**
- ❑ **Tray 3**
- ❑ **By-pass Tray**
- ❑ **Tray 4**

The **Tray 3** and **Tray 4** options display when the optional Paper Bank is installed. The **LCT** option displays when the optional Large Capacity Tray (LCT) is installed. The **Envelope Feeder** option displays when the optional Envelope Feeder is installed. The **By-pass Tray** option does not display when the Envelope Feeder is installed. The **Tray 1** option does not display when the optional Duplex Tray is installed.



The default value is **Tray 1**. However, when the Duplex Tray is installed, the default value is **Tray 2**.

## By-pass Size Selection

You use this selection to specify the fixed size of the paper or envelopes you want to print in the By-pass Tray. This selection no longer displays when the optional Envelope Feeder is installed and the **Envelope** selections display (see below). The options are as follows:

- |  |  |
|--|--|
| <input type="checkbox"/> <b>Letter 11" x 8½"</b> <input type="checkbox"/>                | <input type="checkbox"/> <b>B4 JIS</b> <input type="checkbox"/>    |
| <input type="checkbox"/> <b>Letter 8½" x 11"</b> <input type="checkbox"/>                | <input type="checkbox"/> <b>B5 JIS</b> <input type="checkbox"/>    |
| <input type="checkbox"/> <b>Legal 8½" x 14"</b> <input type="checkbox"/>                 | <input type="checkbox"/> <b>B5 JIS</b> <input type="checkbox"/>    |
| <input type="checkbox"/> <b>11" x 17"</b> <input type="checkbox"/>                       | <input type="checkbox"/> <b>A6</b> <input type="checkbox"/>        |
| <input type="checkbox"/> <b>5½" x 8½"</b> <input type="checkbox"/> ( <b>Halfletter</b> ) | <input type="checkbox"/> <b>8" x 13"</b> <input type="checkbox"/>  |
| <input type="checkbox"/> <b>Exec. 7¼" x 10½"</b> <input type="checkbox"/>                | <input type="checkbox"/> <b>8¼" x 13"</b> <input type="checkbox"/> |
| <input type="checkbox"/> <b>Exec. 10½" x 7¼"</b> <input type="checkbox"/>                | <input type="checkbox"/> <b>8½" x 13"</b> <input type="checkbox"/> |
| <input type="checkbox"/> <b>A3</b> <input type="checkbox"/>                              | <input type="checkbox"/> <b>4⅛" x 9½"</b> <input type="checkbox"/> |
| <input type="checkbox"/> <b>A4</b> <input type="checkbox"/>                              | <input type="checkbox"/> <b>(COM 10 Env)</b>                       |
| <input type="checkbox"/> <b>A4</b> <input type="checkbox"/>                              | <input type="checkbox"/> <b>3⅞" x 7½"</b> <input type="checkbox"/> |
| <input type="checkbox"/> <b>A5</b> <input type="checkbox"/>                              | <input type="checkbox"/> <b>(Monarch Env)</b>                      |
| <input type="checkbox"/> <b>A5</b> <input type="checkbox"/>                              | <input type="checkbox"/> <b>C5 Env</b> <input type="checkbox"/>    |
|  | <input type="checkbox"/> <b>C6 Env</b> <input type="checkbox"/>    |
|  | <input type="checkbox"/> <b>DL Env</b> <input type="checkbox"/>    |
|  | <input type="checkbox"/> <b>Width/Length</b>                       |

The default value is **A4** ☐ .

### Width/Length

You use this option to specify the dimensions of a custom paper size you want to use in the By-pass Tray. The paper size settings are as follows:

- ❑ **Width** - specifies the length of the edge of the paper perpendicular to the feeding direction, in millimeters.
- ❑ **Length** - specifies the length of the edge of the paper parallel to the feeding direction, in millimeters.

Use the [▲] key or the [▼] key to select the dimension value. Holding either key down increases or decreases the value in increments of ten. After you select the value you want, press the [##/↵] key to save your selection.

**Note:** For detailed information on printing custom size paper, refer to the *Printer Driver/Utility Reference <PCL and TIFF>* and the *Printer Driver/Utility Reference <PostScript®-option>*.

### Envelope Size Selection

You use this option to specify the size of the envelopes loaded in the Envelope Feeder. This menu option displays only when the optional Envelope Feeder is installed. The options are as follows:

- |   |            |
|---|------------|
| ❑ 4 <sup>1</sup> / <sub>8</sub> " x 9 <sup>1</sup> / <sub>2</sub> " □□<br>(COM 10 Env)  | ❑ C5 Env □ |
| ❑ 3 <sup>7</sup> / <sub>8</sub> " x 7 <sup>1</sup> / <sub>2</sub> " □□<br>(Monarch Env) | ❑ C6 Env □ |
|   | ❑ DL Env □ |

The default value is 4<sup>1</sup>/<sub>8</sub>" x 9<sup>1</sup>/<sub>2</sub>" □ (COM 10 Env).

## Tray Size (\*) Selection

You use this selection to specify special standard paper sizes for standard input trays, Tray 1 and Tray 2, and for the optional trays, Tray 3 and Tray 4, located in the Paper Bank.

Each of the paper trays has a paper size selection dial to specify the paper size in the tray. You can specify the sizes not indicated on the selection dial by setting the dial to the "\*" position and entering the paper size using this selection. This allows the printer to conveniently accommodate a wide range of paper sizes.

To access the selection for each tray, press the [ #/↵ ] key and press the [ ^ ] key or the [ ▼ ] key until the tray for which you want to specify a special paper size displays. Then press the [ #/↵ ] key to display the options. The options are as follows:

- |  |   |
|--|---|
| <input type="checkbox"/> Letter 11" x 8½" <input type="checkbox"/> | <input type="checkbox"/> A4 <input type="checkbox"/>        |
| <input type="checkbox"/> Letter 8½" x 11" <input type="checkbox"/> | <input type="checkbox"/> A4 <input type="checkbox"/>        |
| <input type="checkbox"/> Legal 8½" x 14" <input type="checkbox"/>  | <input type="checkbox"/> A5 <input type="checkbox"/>        |
| <input type="checkbox"/> 11" x 17" <input type="checkbox"/>        | <input type="checkbox"/> B4 JIS <input type="checkbox"/>    |
| <input type="checkbox"/> Exec. 7¼" x 10½" <input type="checkbox"/> | <input type="checkbox"/> B5 JIS <input type="checkbox"/>    |
| <input type="checkbox"/> Exec. 10½" x 7¼" <input type="checkbox"/> | <input type="checkbox"/> B5 JIS <input type="checkbox"/>    |
| <input type="checkbox"/> 8" x 13" <input type="checkbox"/>         | <input type="checkbox"/> 8¼" x 13" <input type="checkbox"/> |
| <input type="checkbox"/> A3 <input type="checkbox"/>               | <input type="checkbox"/> A3 <input type="checkbox"/>        |

The default value is **A4** ☐ .

**Note:** If the paper size selection dial is set to "\*", and the paper size you selected using the paper size selection dial or the Control Panel does not match the size of paper in the tray, when the printer attempts to print from this tray, the "Paper Size Error Tray <tray number>" message displays. To correct the error, you must place the correct paper size in the tray, and press the [ #/↵ ] key to continue printing.

## Paper Output Submenu

From the Job Control menu, press the [ #/↵ ] key and press the [ ▼ ] key until “Paper Output” displays on the Control Panel. You use this submenu to specify the destination and attributes of your printed output.

The Paper Output submenu contains the Output Tray selection.

### Output Tray Selection

You use this selection to specify an output tray. The options are as follows:

- |   |   |
|---|---|
| <input type="checkbox"/> <b>External Tray</b> | <input type="checkbox"/> <b>Output Tray 4</b>             |
| <input type="checkbox"/> <b>Standard Tray</b> | <input type="checkbox"/> <b>Output Tray 5</b>             |
| <input type="checkbox"/> <b>Output Tray 1</b> | <input type="checkbox"/> <b>Shift Tray Face-down (FD)</b> |
| <input type="checkbox"/> <b>Output Tray 2</b> | <input type="checkbox"/> <b>Shift Tray Face-up (FU)</b>   |
| <input type="checkbox"/> <b>Output Tray 3</b> |   |

The **External Tray** option does not display when the optional Finisher is installed. The **Output Tray 1**, **Output Tray 2**, **Output Tray 3**, **Output Tray 4**, and **Output Tray 5** options display only when the optional Mailbox is installed. The **Shift Tray** options display only when the optional Finisher is installed.

The default value is **Standard Tray**.

**Note:** *When the Mailbox is installed, the standard tray at the top of the printer becomes Output Tray 1.*

## System Submenu

From the Job Control menu, press the [ #/↵ ] key and then press the [ ^ ] key or the [ ▼ ] key until “System” displays on the Control Panel. You use this submenu to make changes to the operating status of the printer.

The System submenu contains the following selections:

- |   |   |
|---|---|
| <input type="checkbox"/> <b>Jam Recovery</b>    | <input type="checkbox"/> <b>Resolution</b>  |
| <input type="checkbox"/> <b>Print PS Errors</b> | <input type="checkbox"/> <b>Image Density</b>   |
| <input type="checkbox"/> <b>Edge Smoothing</b>  | <input type="checkbox"/> <b>PM (Preventive Maintenance) Alarm</b>   |
| <input type="checkbox"/> <b>Toner Saving</b>    | <input type="checkbox"/> <b>Reset Fusing Ut (This menu item displays only when the Fusing Unit must be replaced.)</b> |
| <input type="checkbox"/> <b>Time Out</b>        |   |
| <input type="checkbox"/> <b>Energy Saver</b>    |   |
| <input type="checkbox"/> <b>Low Toner</b>       |   |

### Jam Recovery Selection

You use this selection to enable the printer to recover automatically from paper misfeed. The options are as follows:

- ☐ **On** - enables Jam Recovery. When a paper jam occurs, the printer reprints all lost pages after you clear the paper jam.
- ☐ **Off** - disables Jam Recovery.

The default value is **Off**.

**Note:** When Jam Recovery is enabled, the printer can almost always recover all lost pages. If a misfeed occurs in the Stapler the printer cannot reprint lost pages.

### Print PS Errors Selection

You use this selection to specify that you want the printer to print a PostScript® error page when an error occurs. This selection displays only when the PostScript® option is installed. The options are as follows:

- ☐ **Yes** - prints a PostScript® error page when a PostScript® error occurs, and skips the print job. The PostScript® error page contains information that may help you to diagnose the cause of the error in the PostScript® print file.
- ☐ **No** - does not print a PostScript® error page and skips the PostScript® job that caused the error.

The default value is **No**.

### Edge Smoothing Selection

You use this selection to enhance print quality for text and line art. The options are as follows:

- ☐ **On** - enables Edge Smoothing. The printer rasterizes output to enhance print quality. The appearance of the output emulates a resolution of 1200 dpi, reducing ragged edges and providing printed output with smooth curved and diagonal lines.
- ☐ **Off** - disables Edge Smoothing.

The default value is **On**.

**Note:** *When you enable this function, images and halftones may be adversely affected, and may not print correctly. It is recommended that you disable Edge Smoothing when printing images.*

## Toner Saving Selection

You can use this selection when you print draft copies of documents. When you enable Toner Saving, the printer uses less than the normal amount of toner, which makes black areas print as gray but does not affect readability. The options are as follows:

- ☐ **On** - enables Toner Saving. The printer uses approximately one half of the normal amount of toner.
- ☐ **Off** - disables Toner Saving.

The default value is **Off**.

## Time Out Selection

You use this selection to specify how long the printer waits for more print data before terminating a job when it receives no end of job code.

The options are as follows:

- |  |   |
|--|---|
| <input type="checkbox"/> <b>15 seconds</b> | <input type="checkbox"/> <b>180 seconds</b> |
| <input type="checkbox"/> <b>30 seconds</b> | <input type="checkbox"/> <b>300 seconds</b> |
| <input type="checkbox"/> <b>60 seconds</b> |   |

The default setting is **30 seconds**.

## Energy Saver Selection

You use this selection to specify the length of inactive time after which the printer switches to Energy Saver mode. When the printer is in Energy Saver mode and a job is received, the printer takes about one minute to warm up and print the job. Energy Saver mode meets EPA Energy Star standards.

The options are as follows:

- |  |   |
|--|---|
| <input type="checkbox"/> <b>Off</b>        | <input type="checkbox"/> <b>1 hour</b>  |
| <input type="checkbox"/> <b>15 minutes</b> | <input type="checkbox"/> <b>2 hours</b> |
| <input type="checkbox"/> <b>30 minutes</b> | <input type="checkbox"/> <b>3 hours</b> |

The default value is **15 minutes**.

### Low Toner Selection

You use this selection to specify whether you want the printer to continue to print after a low toner condition is detected. The options are as follows:

- ☐ **Continue** - allows the printer to continue printing. Output becomes lighter and may be unusable unless the toner cartridge is changed.
- ☐ **Stop** - causes the printer to stop printing.

The default value is **Continue**.

### Resolution Selection

You use this selection to set the printer resolution for PCL output. The options are as follows:

- ☐ **300 dpi**
- ☐ **600 dpi**

When the PostScript® option is installed, you can set the printer resolution for PostScript® output. The options are as follows:

- ☐ **300 dpi**
- ☐ **400 dpi**
- ☐ **600 dpi**

The default value for both PCL and PostScript® is **600 dpi**.



## Image Density Selection

You use this selection to set the Image density, or darkness, of the printed output. The options are as follows:

- ☐ **Very Light**
- ☐ **Light**
- ☐ **Normal**
- ☐ **Dark**
- ☐ **Very Dark**

The default value is **Normal**.

**Note:** *You must print several pages before the changed Image Density value becomes effective.*

## PM (Preventive Maintenance) Alarm Selection

You use this selection to specify whether you want the Control Panel to display a message when the printer PCU, the Fusing unit and Rollers must be replaced.

The options are as follows:

- ☐ **On** - displays a preventive maintenance message.
- ☐ **Off** - does not display a preventive maintenance message.

The default value is **Off**.

## Reset Fusing Ut (Unit) Selection

This menu item displays only when the Fusing Unit must be replaced. After the Fusing Unit is replaced, access this menu item and press the **[Enter]** key to reset the counter. This counter, located in the printer engine, determines when the Fusing Unit must be replaced again.

## PCL5 Submenu

From the Job Control menu, press the [ #/↵ ] key and press the [ ▼ ] key until “PCL5 Menu” displays on the Control Panel. You use this submenu to specify some PCL5 output features.

The PCL5 submenu contains the following selections:

- |   |  |
|---|--|
| <input type="checkbox"/> <b>Form Feed</b>   | <input type="checkbox"/> <b>Form Length</b>  |
| <input type="checkbox"/> <b>Orientation</b> | <input type="checkbox"/> <b>Default Font</b> |
| <input type="checkbox"/> <b>Line Wrap</b>   | <input type="checkbox"/> <b>Symbol Set</b>   |

### Form Feed Selection

You use this selection to clear pages from the print buffer. When you press the [ #/↵ ] key while this selection displays, the printer prints and ejects the page stored in the print buffer.

### Orientation Selection

You use this selection to specify the image orientation. The options are as follows:

- ☐ **Portrait** - prints with the left margin along the long side of the paper.
- ☐ **Landscape** - prints with the left margin along the short side of the paper.

The default value is **Portrait**.

## Line Wrap Selection

You use this selection to enable the printer to automatically wrap any line containing an excessive number of characters. The options are as follows:

- ☐ **On** - enables line wrap.
- ☐ **Off** - disables line wrap.

The default value is **Off**.

## Form Length Selection

You use this selection to specify the form length, in lines, for each page. You can specify from **5** to **128** lines. The default value is **60**.

## Default Font Selection

You use this selection to define a default printer font. The options are as follows:

- |   |  |
|---|--|
| <input type="checkbox"/> <b>Font Source</b> | <input type="checkbox"/> <b>Point Size</b> |
| <input type="checkbox"/> <b>Font Number</b> | <input type="checkbox"/> <b>Font Pitch</b> |

### Font Source Option

You use this option to specify the source of the default printer font. The options are as follows:

- ☐ **Internal** - specifies that the default printer font is an internal font.
- ☐ **Download** - specifies that the default printer font is downloaded from the host computer.

The default value is **Internal**.

### Font Number Option

You use this option to select the font number of the default printer font. The valid range is **0** to **50**.

Internal fonts numbered **0**, and **39** to **44**, are fixed-pitch fonts. Fonts numbered **1** to **38** are proportional-space fonts. Internal fonts numbered **45** to **50** are bitmapped fonts.

The default font is Courier, which is font number **0** when the Font Source is Internal, and **1** when the font source is Download. The default value is **0**.

### Point Size Option

You use this option to select the height, in points, of the default printer font. The valid range is **4** to **999.75** points. The default value is **12**.

**Note:** *The Point Size option is available only when you select a proportional-space font. It is not available when you select a fixed-pitch font.*

### Font Pitch Option

You use this option to select the pitch, in characters per inch (cpi), of the default printer font. The valid range is **0.44** to **99.99** cpi. The default value is **10.00**.

### Symbol Set selection

You use this option to select the symbol set for the default printer font. The options are as follows:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> <b>Roman8</b>    | <input type="checkbox"/> <b>PC-852</b>  | <input type="checkbox"/> <b>VN Intl</b> |
| <input type="checkbox"/> <b>ISOLatin1</b> | <input type="checkbox"/> <b>PC-8 tk</b> | <input type="checkbox"/> <b>VN US</b>   |
| <input type="checkbox"/> <b>ISOLatin2</b> | <input type="checkbox"/> <b>WinL1</b>   | <input type="checkbox"/> <b>MS Publ</b> |
| <input type="checkbox"/> <b>ISOLatin5</b> | <input type="checkbox"/> <b>WinL2</b>   | <input type="checkbox"/> <b>Math-8</b>  |
| <input type="checkbox"/> <b>PC-8</b>      | <input type="checkbox"/> <b>WinL5</b>   | <input type="checkbox"/> <b>PS Math</b> |
| <input type="checkbox"/> <b>PC-8 dn</b>   | <input type="checkbox"/> <b>Desktop</b> | <input type="checkbox"/> <b>VN Math</b> |
| <input type="checkbox"/> <b>PC-850</b>    | <input type="checkbox"/> <b>PS Text</b> | <input type="checkbox"/> <b>Pifont</b>  |

- |                                |                                |                                 |
|--------------------------------|--------------------------------|---------------------------------|
| <input type="checkbox"/> Legal | <input type="checkbox"/> ISO15 | <input type="checkbox"/> ISO69  |
| <input type="checkbox"/> ISO4  | <input type="checkbox"/> ISO17 | <input type="checkbox"/> Win3.0 |
| <input type="checkbox"/> ISO6  | <input type="checkbox"/> ISO21 |                                 |
| <input type="checkbox"/> ISO11 | <input type="checkbox"/> ISO60 |                                 |

The default value is **Roman8**.

## Menu Reset

From the Job Control menu, press the [ #/↵ ] key and press the [ ^ ] key or the [ ▼ ] key until “Menu Reset” displays on the Control Panel.

When you press the [ #/↵ ] key while “Menu Reset” displays, all printer settings that are controlled in the Job Control menu are reset to the original default values. The printer returns to Ready mode after resetting.

## USING THE HOST INTERFACE MENU

To access the Host Interface menu, press the [ ↵ ] key to enter Menu mode. Press the [ ^ ] key or the [ ▼ ] key until “Host Interface Menu” displays.

The Host Interface menu contains the following:

- ☐ **Parallel Setup**
- ☐ **NIC Personality**
- ☐ **Menu Reset**

**Note:** The **NIC Personality** menu displays only when the NIC Unit is installed.

## Parallel Setup Submenu

From the Host Interface menu, press the [ #/↵ ] key and press the [ ^ ] key or the [ ▼ ] key until “Parallel Setup” displays on the Control Panel.

The Parallel Setup submenu contains the following selections:

- ☐ **Personality**
- ☐ **Bi-Direction**

### Personality Selection

You use this selection to specify the language interpreter mode for the parallel port. The options are as follows:

- |   |  |
|---|--|
| <input type="checkbox"/> <b>PCL</b>           | <input type="checkbox"/> <b>Auto Sense</b>       |
| <input type="checkbox"/> <b>TIFF Raw Mode</b> | <input type="checkbox"/> <b>PS (PostScript®)</b> |
| <input type="checkbox"/> <b>Hex Dump</b>      | <input type="checkbox"/> <b>PS TBCP</b>          |

The **Auto Sense**, **PS (PostScript®)** and PS TBCP options display only when the PostScript® option is installed. **PS TBCP** (Tagged Binary Communications Protocol) is a binary format used by PostScript®.

**Note:** When Parallel or NIC Personality is set to **PS (PostScript®)**, the printer will not be able to interpret PJI commands. If you use the PostScript® driver, Parallel or NIC personality should be set to Auto Sense.  
TIFF Raw Mode supports printing of TIFF files with no PJI commands included in the print file.  
Hex Dump prints the print file as hexadecimal data instead of interpreting and formatting the print data. This is used for error analysis of the print file.

The default value is **PCL**. However, when the PostScript® option is installed, the default value is **Auto Sense**.

## Bi-Direction Selection

You use this selection to specify whether you want the printer to send status readback messages to the host computer. The options are as follows:

- ☐ **On** - enables Bi-Direction mode
- ☐ **Off** - disables Bi-Direction mode

The default setting is **On**.

## NIC Personality Submenu

From the Host Interface menu, press the [ #/↵ ] key and press the [ ^ ] key or the [ ▼ ] key until "NIC Personality" displays on the Control Panel. You use this submenu to specify the language interpreter for the network connection.

The NIC Personality submenu contains the following selections:

- |   |  |
|---|--|
| <input type="checkbox"/> <b>PCL</b>           | <input type="checkbox"/> <b>PS (PostScript®)</b> |
| <input type="checkbox"/> <b>TIFF Raw Mode</b> | <input type="checkbox"/> <b>PS TBCP</b>          |
| <input type="checkbox"/> <b>Auto Sense</b>    |  |

The **Auto Sense**, **PS (PostScript®)** and **PS TBCP** (Tagged Binary Communications Protocol) options display only when the PostScript® option is installed. The default value is **PCL**. However, when the PostScript® option is installed, the default value is **Auto Sense**.

**Note:** When the NIC Personality is set to **PS (PostScript®)**, the printer cannot interpret PDL commands. If you use the PostScript® driver, Parallel or NIC personality should be set to Auto Sense.

## Menu Reset

From the Host Interface menu, press the [ #/↵ ] key and press the [ ^ ] key or [ ▼ ] key until “Menu Reset” displays on the Control Panel.

When you press the [ #/↵ ] key while “Menu Reset” displays, all settings controlled in the Host Interface menu are reset to the original default values. The printer returns to Ready mode after resetting.

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## USING THE LANGUAGE MENU

To access the Language menu, press the [ ↵ ] key to enter Menu mode. Press the [ ^ ] key or the [ ▼ ] key until “Language” displays.

The Language menu allows you to select the language that you want to use on the display panel. The available choices are as follows:

- |   |   |
|---|---|
| <input type="checkbox"/> <b>English</b> | <input type="checkbox"/> <b>French</b>  |
| <input type="checkbox"/> <b>German</b>  | <input type="checkbox"/> <b>Italian</b> |

The default value is **English**.



## USING THE TEST/PRINT MENU

To access the Test/Print menu, press the [ **↵** ] key to enter Menu mode. Press the [ **▲** ] key or the [ **▼** ] key until “Test/Print” displays.

The Test/Print menu contains the following selections:

- ☐ **System Reset**
- ☐ **PCL Font List**
- ☐ **System Config**
- ☐ **Error Log**
- ☐ **PS Font List**

**Note:** This PS font list menu displays only when the PostScript® option is installed.

### System Reset

From the Test/Print menu, press the [ **#/↵** ] key and press the [ **▲** ] key or the [ **▼** ] key until “System Reset” displays on the Control Panel.

When you press the [ **#/↵** ] key while “System Reset” displays on the Control Panel, the printer resets to the settings you saved most recently. The system resets and goes through initialization sequence, including resetting DRAM memory. Therefore, all downloaded fonts are lost.

### PCL Font List

From the Host Interface menu, press the [ **#/↵** ] key and press the [ **▲** ] key or the [ **▼** ] key until “PCL Font List” displays on the Control Panel.

When you press the [ **#/↵** ] key while “PCL Font List” displays on the Control Panel, a page prints listing the resident PCL fonts, and permanently downloaded fonts.

## System Config

From the Host Interface menu, press the [ #/↵ ] key and press the [ ^ ] key or the [ ▼ ] key until “System Config” displays on the Control Panel.

When you press the [ #/↵ ] key while “System Config” displays on the Control Panel, a page prints describing the current system configuration.

## Error Log

From the Host Interface menu, press the [ #/↵ ] key and press the [ ^ ] key or the [ ▼ ] key until “Error Log” displays on the Control Panel.

When you press the [ #/↵ ] key while “Error Log” displays on the Control Panel, a page prints listing the last 15 errors and 15 paper misfeeds locations. ➡ Refer to the “Troubleshooting” chapter in this manual for more information on printer errors.

## PS Font List

From the Host Interface menu, press the [ #/↵ ] key and press the [ ^ ] key or the [ ▼ ] key until “PS Font List” displays on the Control Panel. This option displays only when the PostScript® option is installed.

When you press the [ #/↵ ] key while “PS Font List” displays on the Control Panel, a page prints listing all resident PostScript® fonts, downloaded fonts in RAM, and all PostScript® fonts loaded on the Hard Disk.

### **3. MAINTAINING THE PRINTER**

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## OVERVIEW

This chapter provides information on the procedures for maintaining the machine, including periodic replacements and cleaning procedures.


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## TONER CARTRIDGE

The Toner Cartridge should be replaced when print quality starts to deteriorate, or when the “Add Toner” message appears on the Control Panel.

### Storing Toner Cartridges

Make sure to store Toner Cartridges at room temperature, in their original packages.

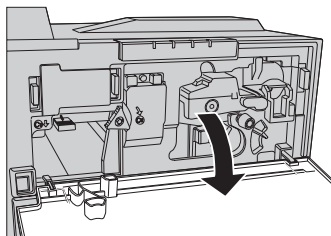
-  **Warnings:** *Do not incinerate toner or toner containers.  
Toner dust might ignite when exposed to open flames.  
Do not eat or swallow toner.  
Keep toner or toner containers out of reach of children.*

## Replacing the Toner Cartridge

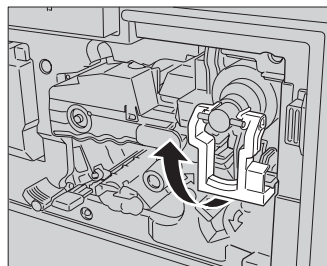
Use the following procedure to replace the Toner Cartridge.

**Important:** Be sure to leave power turned on when replacing the Toner Cartridge. Do not turn power off!

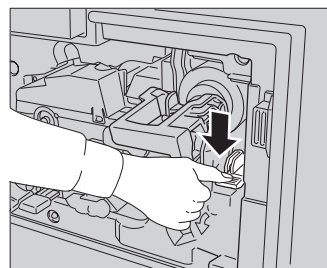
- 1 Open the Front Cover.



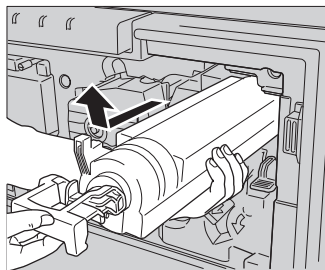
- 2 Raise the square shaped green Toner Cartridge handle on the far right.



- 3 Press the lever under the Toner Cartridge down as far as it goes.



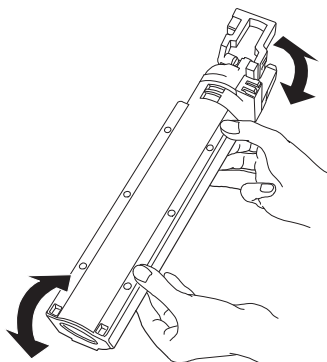
- 4** Pull out the Toner Cartridge by the green handle, supporting the center of the cartridge with your other hand as shown.



**Note:** You will feel the Toner Cartridge stop just before its end exits from the machine. This is to keep the end of the cartridge from falling down and possibly spilling toner. Lift up on the Toner Cartridge with both hands to free it from the machine.

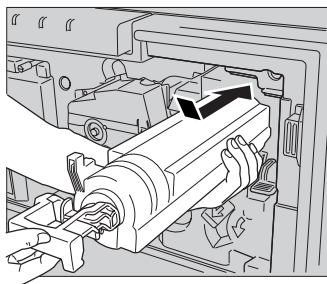
- 5** Follow the recycling instructions on the package of the new Toner Cartridge to dispose of the old one.

- 6** Remove the new Toner Cartridge from its package. Gently rock it back and forth a few times to make sure that the toner inside is distributed evenly.



- 7** Remove the tape securing the green handle at the end of the new Toner Cartridge.

- 8** Insert the new Toner Cartridge in the machine by tilting upward the end with the green handle and inserting the opposite end into the Toner Cartridge position. Then bring the Toner Cartridge level and insert fully until the small green lever clicks up into position.



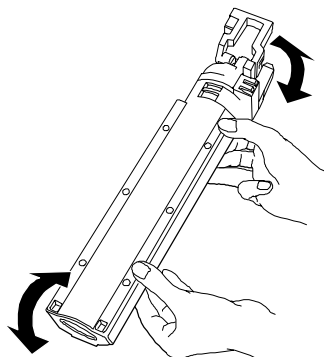
- 9 Lower the square shaped green Toner Cartridge handle into place. The lever below the Toner Cartridge should snap back into its raised position at this time.
- 19 Close the Front Cover.

## Low Toner Condition

When “Add Toner” message displays on the Control Panel, this indicates that the toner inside the cartridge is getting low. If you want to clear this message and continue printing, the “Low Toner” selection of the System submenu must be set to “Continue.” Try redistributing the toner as described below or change the Toner Cartridge when printing becomes too light.

Sometimes unevenly distributed toner inside the cartridge can cause the “Add Toner” message to appear. Whenever the message first appears, try using the following procedure to redistribute the toner inside the cartridge.

- 1 Use steps 1 through 4 under “Replacing the Toner Cartridge” to remove the Toner Cartridge from the machine.
- 2 Gently rock the Toner Cartridge back and forth a few times to evenly distribute the toner inside.



- 3 Use steps 8 through 10 under “Replacing the Toner Cartridge” to replace the Toner Cartridge in the machine.

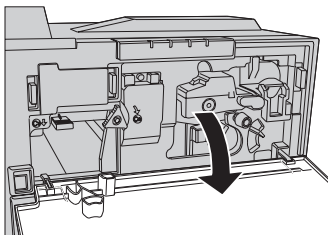
## PHOTOCONDUCTOR UNIT (PCU)

The PCU should be replaced when print quality starts to deteriorate, or when the “Change PCU” message appears on the Control Panel.

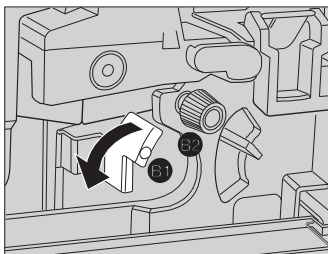
### Replacing the PCU

Use the following procedure to replace the PCU.

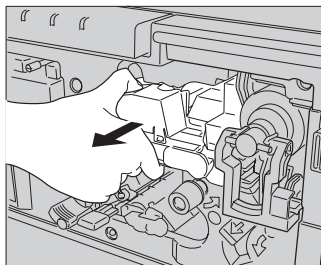
- 1 Open the Front Cover.



- 2 Move the curved blue lever “B1” down to the left.

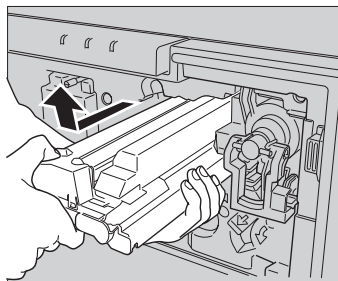


- 3 Pressing down on the top of the PCU as shown in the illustration, pull it out of the machine.





**Note:** Be sure to support the center of the PCU with your other hand as you pull it out.

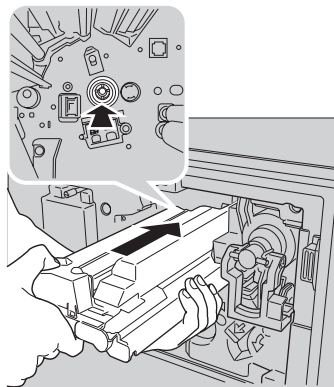


**Note:** You will feel the PCU stop when it is about half way out. This is to keep the PCU from falling accidentally. Lift up on the PCU with both hands to free it from the machine.

**4** Follow the recycling instructions on the package of the new CPU to dispose of the old one.

**5** Remove the new PCU from its package.

**6** Using both hands, slide the new PCU into the machine as far as it goes. Make sure that the shaft inside the machine (which rotates the drum) seats correctly into the slot on the inside end of the PCU.



**Note:** Be sure to gently but firmly press on the end of the PCU until you hear it snap into place.

**7** Turn the lever "B1" up to the right.

**8** Close the Front Cover of the machine.

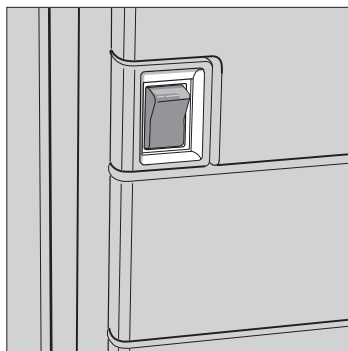
## TRANSFER ROLLER UNIT, FUSING UNIT, AND PAPER FEED ROLLERS

The transfer roller unit, Fusing Unit and paper feed rollers should be replaced when print quality starts to deteriorate, or when the “Change Fusing Unit” message appears on the Control Panel.

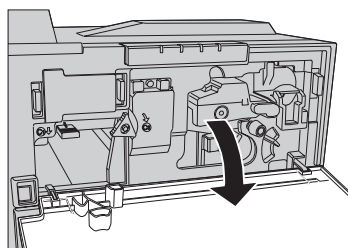
### Replacing the Transfer Roller Unit

Use the following procedure to replace the transfer roller unit.

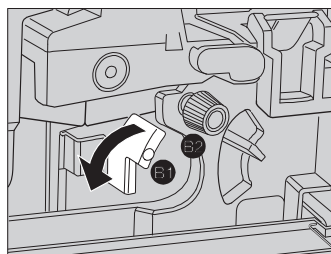
- 1** Turn off machine power and unplug its power cord.



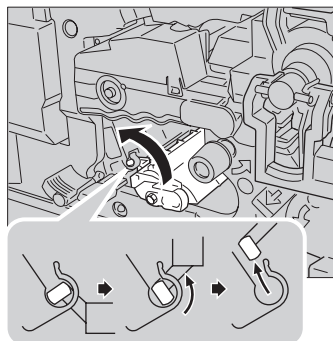
- 2** Open the Front Cover.



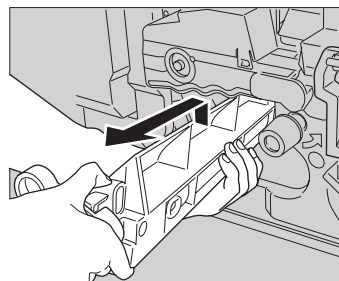
- 3** Move the curved blue lever “B1” down to the left.



- 4 Swing the transfer roller unit up to the left so its rectangular shaft is positioned for removal as shown in the illustration.



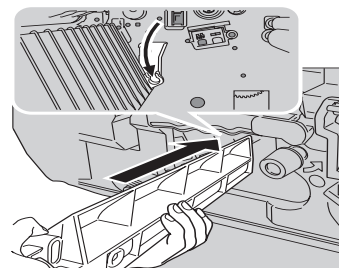
- 5 Lifting up on the transfer roller unit, slide it carefully out of the machine.



- 6 Follow the recycling instructions on the package of the transfer roller unit to dispose of the old one.

- 7 Remove the new transfer roller unit from its package.

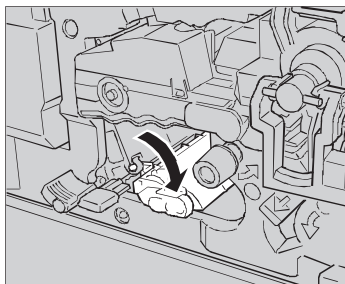
- 8 Using both hands, slide the new transfer roller unit into the machine. Make sure that the rectangular shafts on either end of the transfer roller unit seat correctly into the two bearings that support them.



## MAINTAINING THE PRINTER

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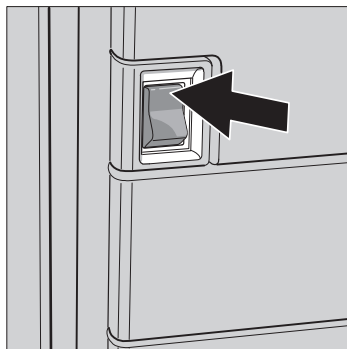
- 9** Once the shafts are seated correctly, swing the transfer roller unit down into place.



- 19** Turn the lever “B1” up to the right.

- ☐ Close the Front Cover of the machine.

- ☐ Plug in the power cord and turn on the machine power.

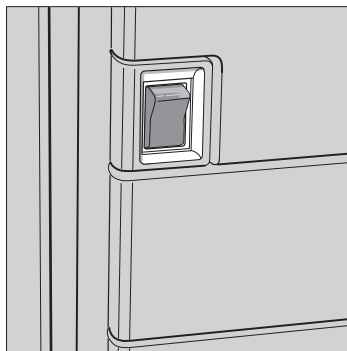


# Replacing the Fusing Unit

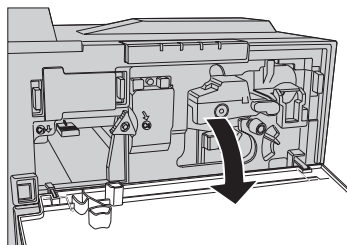
Use the following procedure to replace the Fusing Unit.

**⚠ Warning:** *Wait until the Fusing Unit is completely cooled off before attempting to handle it.*

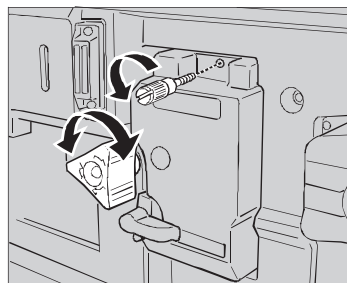
- 1 Turn off machine power and unplug its power cord.



- 2 Open the Front Cover.

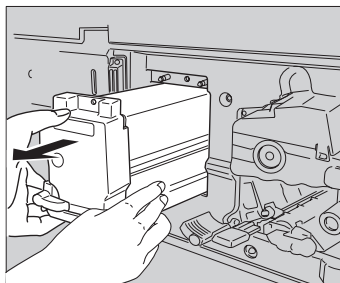


- 3 Rotate the blue triangular knob next to the Fusing Unit so the flat side of the knob is facing the unit. Use a coin to remove the metal screw at the top of the Fusing Unit.



- 4** Carefully pull the Fusing Unit out of the machine.

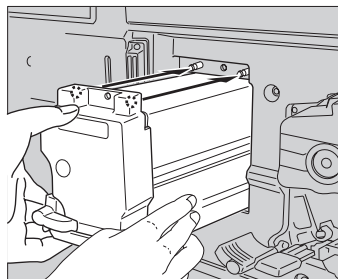
**Note:** Be sure to support the center of the Fusing Unit with your other hand as you pull it out.



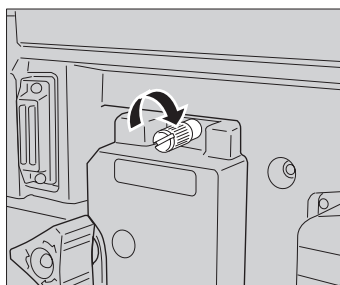
- 5** Follow the recycling instructions on the package of the new Fusing Unit to dispose of the old one.

- 6** Remove the new Fusing Unit from its package.

- 7** Using both hands, slide the new Fusing Unit into the machine.



- 8** Replace the screw and use a coin to tighten it securely.



- 9** Rotate the triangular knob so that one of its corners is pointed towards the Fusing Unit, securing it in place.

- 10** Close the Front Cover.

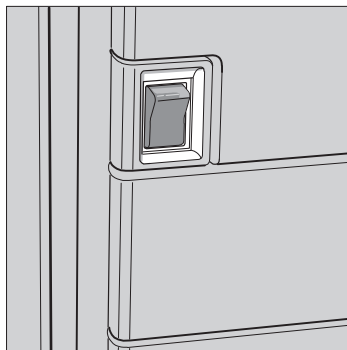
- 11** Plug in the power cord and turn on the machine power.

- Press the [ **↵** ] key to enter the Menu mode (On Line indicator off) and then press the [ **#/↵** ] key.
- Press the [ **▲** ] key until “Job Control” appears on the Control Panel.
- Press the [ **#/↵** ] key and then press the [ **▼** ] key until “System ” appears.
- Press the [ **#/↵** ] key and then press the [ **▼** ] key until “Reset Fusing Ut” appears.
- Press the [ **#/↵** ] key to reset “Reset Fusing Ut” message.

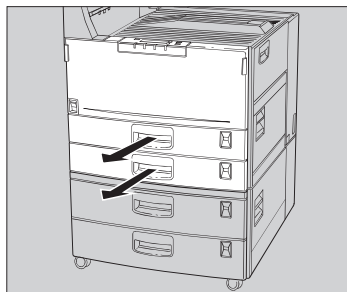
## Replacing the Paper Feed Rollers

Use the following procedure to replace the upper and lower paper feed rollers.

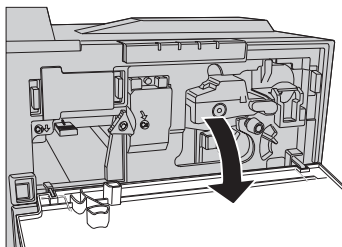
- 1** Turn off machine power and unplug its power cord.



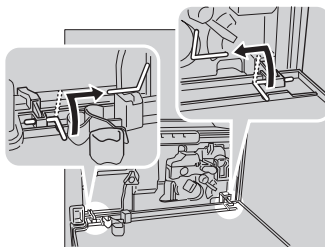
- 2** Pull out the top and second paper feed tray drawers and remove them from the machine.



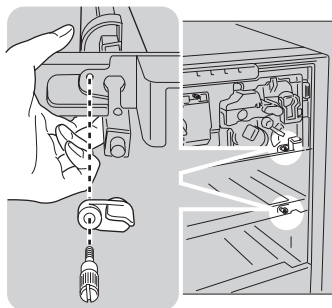
- 3** Open the Front Cover.



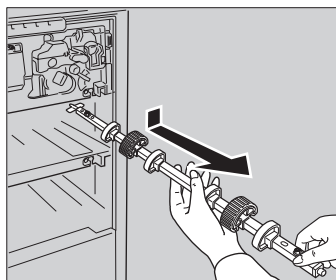
- 4** Detach the Front Cover from the machine. Lift up the L-shaped hinge bars and pull out the bars.



- 5** Use a coin to remove the screws that secure the black plastic stoppers in place on the far right, and then remove the stoppers.



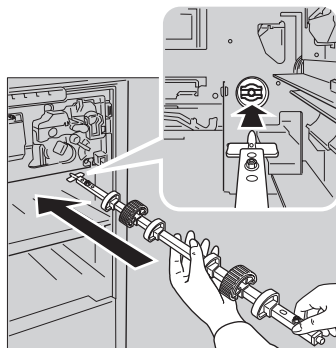
- 6** Carefully pull out the upper and lower rollers.



- 7** Follow the recycling instructions on the package of the new paper feed rollers to dispose of the old ones.



- 8 Carefully slide the new paper feed rollers into the machine, making sure the plastic fins on the ends of their shafts seat securely into the slots inside the machine as shown in the illustration.



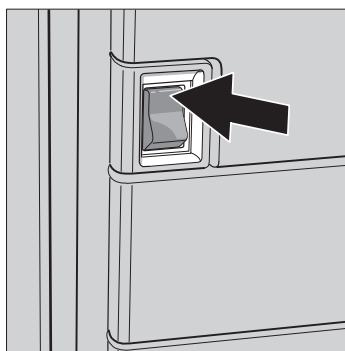
**Note:** Make sure that the round sides of the paper feed rollers are facing up when you slide them into the machine.

- 9 Replace the two black plastic retaining clips and secure them in place with their screws.

- 10 Replace the two paper feed drawers.

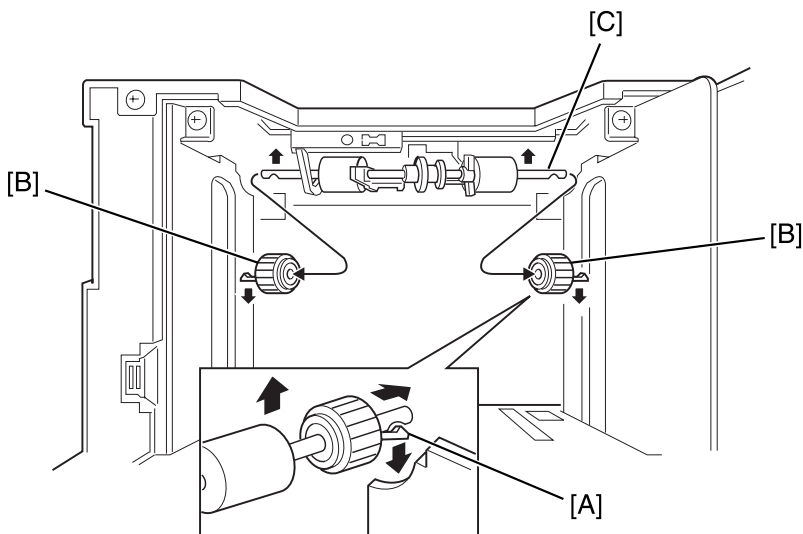
- 11 Reattach the Front Cover with the two L-shaped hinge bars, and close the Front Cover.

- 12 Plug in the power cord and turn on the machine power.



## Replacing the LCT Paper Feed Rollers

When the optional large capacity tray is installed, use the following procedure to replace its two paper feed rollers.



- 1** Open the LCT cover.
- 2** Unlock the hook [A] of the paper feed roller [B].
- 3** Lift up the paper feed roller shaft [C], then remove the paper feed rollers [B].
- 4** Insert new rollers into [C], and return the paper feed roller unit to its original position.

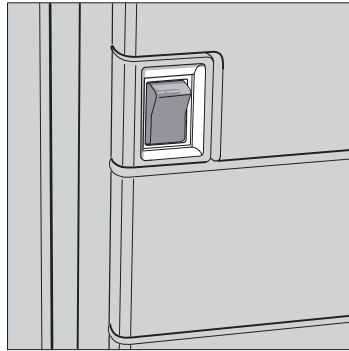
# CLEANING

Keep the machine clean to ensure best print quality. You may need to clean the machine when you notice print quality problems, such as smudging or streaking.

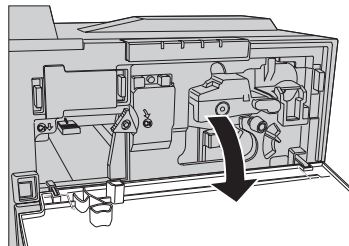
To clean the outside of the machine, use a slightly moistened cloth. Follow these steps to clean the inside of the machine:

**⚠ CAUTION:** Do not use ammonia-based cleaning products near the machine.

- 1 Turn off machine power and unplug its power cord.

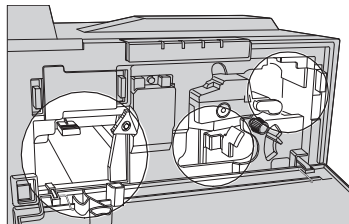


- 2 Open the Front Cover.



- 3 Remove the Toner Cartridge.  
➡ Refer to the “Toner Cartridges” in this chapter for more instructions.

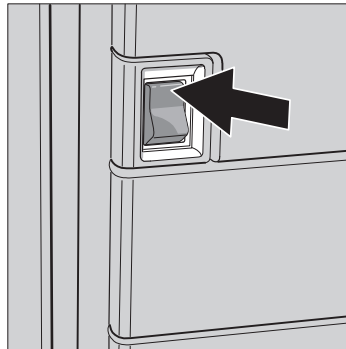
- 4 With a dry, lint-free cloth, carefully wipe any dust, toner residue, or paper residue from the paper path areas and the Toner Cartridge area.



## MAINTAINING THE PRINTER

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- 5** When the optional Duplex Tray is installed, pull out the tray and wipe the top surfaces and rollers.
- 6** Replace the Toner Cartridge.
- 7** Close the Front Cover.
- 8** Plug in the power cord and turn on the machine power.



## 4. USING THE OPTIONS

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# OVERVIEW

This chapter provides information on how to install and use options that are available for the machine.

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## POSTSCRIPT® OPTION

The PostScript® option provides Adobe® PostScript® Level II. It consists of the following components:

- ❑ PostScript® ROM DIMM module
- ❑ PostScript® printer driver software.

➡ Refer to “Printer Driver/Utility Reference <PostScript® - option>” for more information on setting up and using the optional PostScript® printer driver.

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## NETWORK CONNECTIONS

Optional Network Interface Cards (NIC) can be installed to allow direct connection to an Ethernet or Token Ring network.

The Ethernet card supports 10 BaseT Unshielded Twisted Pair (UTP) or 10 Base2 (BNC) connections. The Token Ring card supports UTP or Shielded Twisted Pair (STP) connections, with a line speed of 4 megabits per second (Mbps) or 16 Mbps.

You can use the machine in a network environment as follows.

- ❑ Using the appropriate network management software and printer driver
- ❑ Attaching the machine to a networked computer set up as a server

Table 4-1 lists supported platforms and file server software required for each.

**Table 4-1. Supported network configurations**

Client	Driver	File Server	Protocol
Windows 3.1 Windows for Workgroups	PCL TIFF PostScript®	Netware 3.x Netware 4.x	IPX/SPX TCP/IP
Windows 95	PCL TIFF PostScript®	Netware 3.x Netware 4.x	IPX/SPX TCP/IP
Macintosh	PostScript®	_____	AppleTalk

In a mixed network environment, the NIC automatically switches among network protocols.

☛ Refer to the *Network Printer Server User Guide* for more information on installing the NIC.

**Note:** Make sure to consult your Network Administrator before connecting your machine to a network.☛ Refer to the “Troubleshooting” chapter in this manual for information on resolving network connection problems.

## MEMORY EXPANSION

The machine has a base Dynamic Random Access Memory (DRAM) of 8 megabytes (MB). You can upgrade memory by inserting additional memory modules in the two available Single Line Memory Module (SIMM) sockets.

**Note:** The machine has an additional socket that accepts only a PostScript® ROM Dual Line Memory Module (DIMM). Install the PostScript® ROM DIMM module when you want to use the PostScript® option.

☛ Refer to the “Installing DRAM SIMM Modules”.

☛ Refer to this chapter for instructions on how to install the PostScript ROM DIMM module.

The DRAM SIMM sockets accept modules of 4 MB, 8 MB, 16 MB, or 32 MB. You can add a total of 64 MB of DRAM, for a total of 68 MB.

You should install additional DRAM when you print high-resolution graphics or large documents on a regular basis, or use memory-intensive features such as special fonts or duplex printing. Adding memory increases printing speed.

Extra memory is required for some features such as duplex print jobs on large paper sizes. Table 4-2, 4-3 list the amount of memory required for duplex printing on large paper sizes.

**Table 4-2. TIFF memory requirement for paper size / dpi (uncompressed)**

Uncomp.	Simplex				Duplex			
	200dpi	300dpi	400dpi	600dpi	200dpi	300dpi	400dpi	600dpi
Letter/A4	8MB	8MB	8MB	8MB	8MB	8MB	8MB	12MB
Legal	8MB	8MB	8MB	12MB	8MB	8MB	8MB	12MB
B4/B5	8MB	8MB	8MB	16MB	8MB	8MB	8MB	16MB
Ledger/A3	8MB	8MB	8MB	20MB	8MB	8MB	12MB	20MB

**Table 4-3. TIFF memory requirement for paper size / dpi (uncompressed, G3/G4/JBIG)**

Uncomp.	Simplex				Duplex			
	200dpi	300dpi	400dpi	600dpi	200dpi	300dpi	400dpi	600dpi
Letter/A4	8MB	8MB	8MB	12MB	8MB	8MB	8MB	12/20MB*
Legal	8MB	8MB	8MB	16MB	8MB	8MB	12MB	24MB
B4/B5	8MB	8MB	8MB	16MB	8MB	12MB	12MB	24MB
Ledger/A3	8MB	8MB	8MB	20MB	8MB	12MB	16MB	24MB

\*12MB=  , 20MB=  (rotation required)



## Selecting DRAM SIMM Modules

Table 4-4 lists by product number and manufacturer the DRAM SIMM modules that are approved for use with this machine.

**Table 4-4. SIMM modules compatible with this machine**

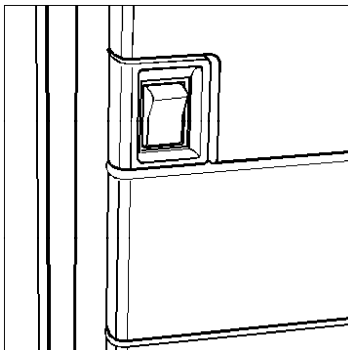
	<b>TOSHIBA</b>	<b>mitsubishi</b>	<b>SAMUSUNG</b>
4 MB Module	THM3210B0 THM3210B5	MH1M32 MH1M325	KMM5321200 KMM5321204
8 MB Module	THM3220C0 THM3220C5	MH2M32 MH2M325	KMM5322200 KMM5322204
16 MB Module	THM324000 THM324005	MH4M32 MH4M325	KMM5324100 KMM5324104
32 MB Module	THM328020 THM328025	MH8M32	KMM5328100 KMM5328104

All DRAM SIMM modules must be used at 70 ns access time or less. Exact equivalent memory modules from other manufactures may also be used.

## Installing DRAM SIMM Modules

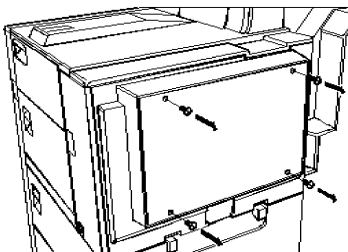
Follow these steps to install DRAM SIMM modules.

- 1 Turn off the machine power the machine and unplug the power cord.



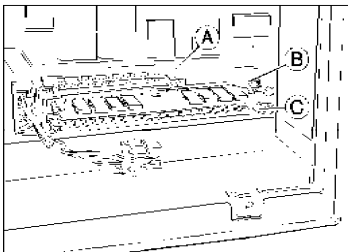
- 2 Disconnect the parallel cable and the network cable as needed.

- 3 Remove the four coin screws that secure the cover of the controller board on the back of the machine.



- 4 Remove the controller board cover.

- 5 Identify the sockets where you can install DRAM SIMM modules. Sockets "B" and "C" can accept DRAM SIMM modules. Socket "A" can accept a PostScript® ROM DIMM module only.

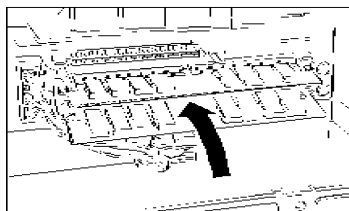


**Note:** Socket "B" already has a DRAM SIMM module installed in it. To increase memory size, insert a DRAM SIMM module into Socket "C". If you need to increase memory even further, replace the DRAM SIMM modules in Socket "B" and Socket "C" with larger capacity DRAM SIMM modules.

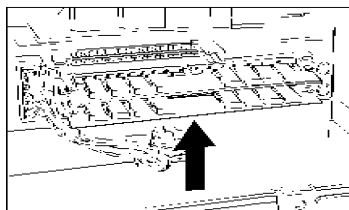
**6** Make sure to touch the frame of the machine or use an anti-static grounding product to discharge static electricity before you touch the DRAM SIMM module.

**7** Make sure to handle the DRAM SIMM module by its edges only. Do not touch the surface of the DRAM SIMM module.

**8** Hold the DRAM SIMM module at a 30 degree angle, making sure the corner notch is on the left side and the metallic connectors are pointed toward the DRAM SIMM socket.



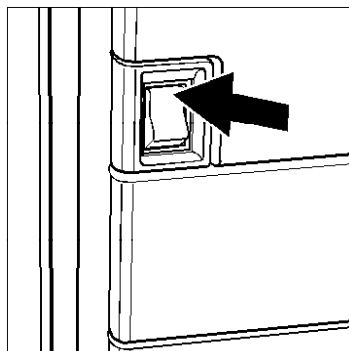
**9** Gently push the DRAM SIMM module into the socket, rotating the module up until the module snaps into the tabs on the socket and the metal retaining clips lock the module in place.



**19** Replace the controller board cover and reinstall the screws.

**20** Reconnect cables and plug in the power cord.

**21** Turn on the machine power. The machine detects the additional memory. To verify whether the additional memory was installed correctly, you can print a System Configuration page. ➔ Refer to the “Using the Control Panel” chapter in this manual for instructions on how to print a configuration page.



## HARD DISK OPTION

You can add a Hard Disk option to allow for permanent soft font and to enable some printing features. The Hard Disk is required for the following features.

- ❑ Disk Based Collation
- ❑ Permanent PostScript® soft font storage

### Installation

Use the instructions that come with the Hard Disk to install it.

### Partitioning

The Hard Disk is partitioned as follows:

- ❑ **Permanent storage** - one half of the disk capacity is allocated for font data, when the PostScript® option is installed. This reduces the available storage area for Disk Based Collation.
- ❑ **Temporary storage** - one half of the disk capacity is allocated to Disk Based Collation, when the PostScript® option is installed. If the PostScript® option is not installed, temporary storage capacity occupies the full disk.

### Disk Based Collation

This feature makes it easy to separate your printed output into complete sets, and reduces printing time. You use the Disk Based Collation feature to print multiple copy job in collated sets.

Normally, all copies of a single page are printed at the same time. For example, when you specify five copies of a four-page job, five copies of page 1 are printed, then five copies of page 2 are printed, and so forth. If you select Collation using your application, the application sends the entire document to the printer five times.

When you use the Disk Based Collation feature, your application sends the entire document to the printer once. The printer images each page of the document and stores the page images on the Hard Disk. The printer then retrieves and prints pages 1 through the last page of the first set, pages 1

through the last page of the second set, and so forth. It also reduces network traffic, if the printer is connected to a network.

☛ Refer to Printer Driver/Utility Reference <PCL and TIFF> and Printer Driver/Utility Reference <PostScript®-option>.

## Soft Font Storage

You can use the Hard Disk to store PostScript® soft fonts that you commonly use with your Windows or Macintosh applications. Storing soft fonts on the Hard Disk reduces printing time because the printer driver does not have to retrieve and download fonts for each print job.

You download PostScript® soft fonts for disk storage using your Windows 3.1 printer driver.

☛ Refer to Printer Driver/Utility Reference <PostScript®-option> for more information on downloading soft fonts using the optional PostScript® driver. If you are using a Macintosh, you can use the LaserWriter Utility to download fonts to the printer's Hard Disk.

## INPUT OPTIONS

The following optional input trays are available.

- ❑ Envelope Feeder
- ❑ Large Capacity Tray (LCT)
- ❑ Paper Bank

### Envelope Feeder

The optional Envelope Feeder holds up to 100 envelopes and replaces the By-pass Tray located on the right side of the machine.

**Note:** *You can also print up to ten envelopes at a time using the By-pass Tray. ➔ Refer to the “Setting Up” chapter in this manual for information on using the By-pass Tray.*

### Media Selection

You can use the Envelope Feeder to print on the following types of envelopes.

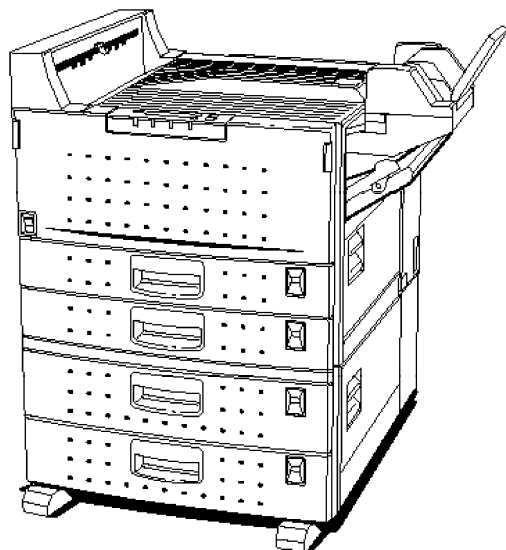
- ❑ **4 1/8" x 9 1/2" □ (COM 10 Env)**
- ❑ **3 7/8" x 7 1/2" □ (Monarch Env)**
- ❑ **C5 Env □**
- ❑ **C6 Env □**
- ❑ **DL Env □**

➔ Refer to the “Specifications” chapter in this manual for more information on selecting envelopes.

## Installing the Envelope Feeder

Follow the instruction sheet provided with the Envelope Feeder to install it. You must turn off the machine power before installing or removing the Envelope Feeder.

Figure 4-1. Machine with Envelope Feeder

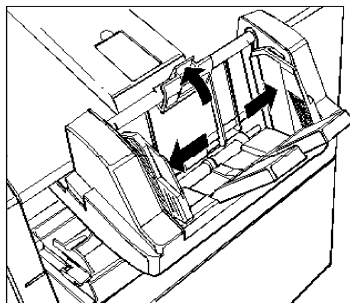


## Using the Envelope Feeder

Follow these steps to print envelopes using the Envelope Feeder.

- 1 Using the printer Control Panel, enter the size of the envelopes you want to print in the Envelope Feeder.  
➡ Refer to the “Using the Control Panel” chapter in this manual for instructions on how to enter the envelope size.
- 2 Using the Print menu of your application, select the envelope size you want to use.
- 3 Make sure the envelopes you want to print are undamaged and not curled.

- 4** Raise the spring-loaded pressure bar and lock it into position at the top of the Envelope Feeder.

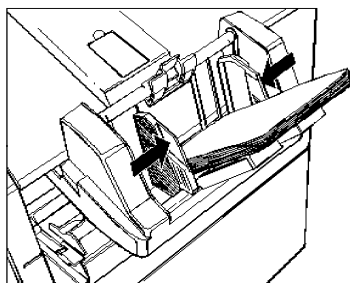


- 5** Move the envelope guides toward the edges of the Envelope Feeder.

- 6** Prepare a stack of up to 100 envelopes by fanning them and evening up the edges to make sure that none of the envelope flaps will open. Place the stack into the Envelope Feeder, face up with the top of the envelopes facing the rear of the printer.

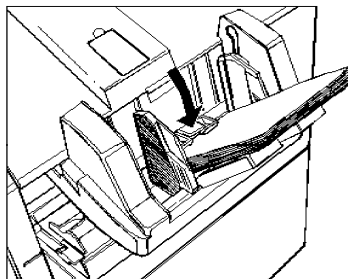
**Note:** Make sure the end of the stack going into the feeder is angled, so that the bottom of the stack extends forward (into the feeder) further than the top of the stack. The end of the stack should not be perfectly flat.

- 7** Position the guides against the stack of envelopes.

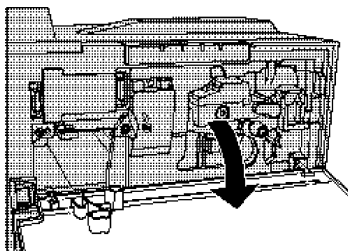




- 8 Lower the pressure bar so that it rests on top of the stack of envelopes.



- 9 Open the Front Cover.



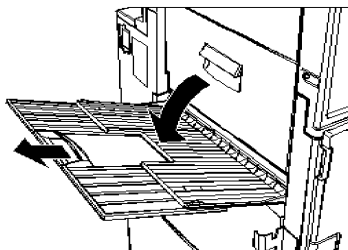
- 19 Pull the lever down to the left so you can see the ☒ mark under it as shown. Then, close the Front Cover.

**Important:** Be sure to return the lever to its original position after finishing the envelope printing job.



- Open the External Tray, or specify the output destination as Shift Tray Face-up.

**Note:** The Shift Tray is available only when the optional Finisher is installed.



- To output to the Shift Tray, you must select Shift Tray Face-up as the output destination, using your application, your printer driver, or Control Panel.

- ☐ Print the job. The envelopes are output face-up to the External Tray or the Shift Tray.
- ☐ When the print job is complete, make sure to change the Control Panel settings if necessary.

## Large Capacity Tray

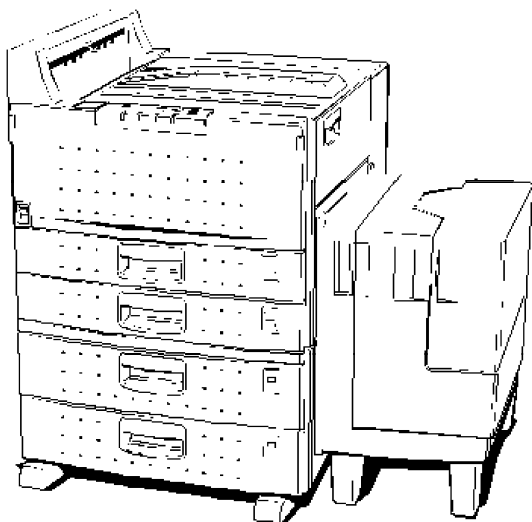
The Large Capacity Tray (LCT) holds up to 1,500 sheets of 8½" x 11" or A4 paper. You can use the LCT as a supplemental input tray.

**Note:** *If you want to change the paper size for the LCT, contact your service provider.*

## Installing the LCT

Follow the instruction sheet provided with the LCT to install it.

**Figure 4-2. Machine with LCT**

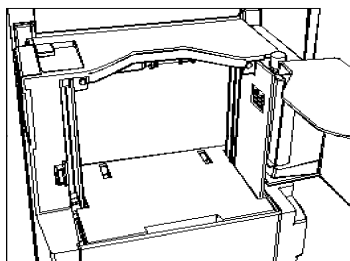


## Using the LCT

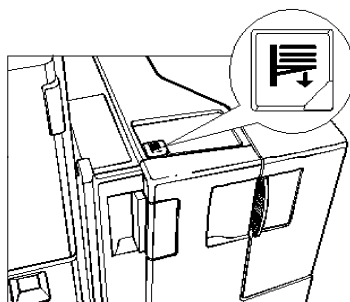
Follow these steps to print using the LCT.

- 1** Using the Print menu of your application, select the LCT as the input tray.

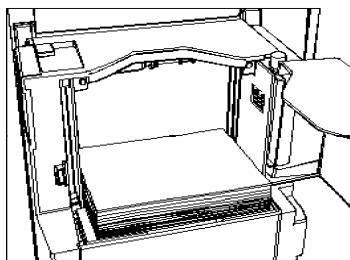
- 2** Open the LCT door. When the LCT runs out of paper, the paper tray descends and allows you to load paper. Do not attempt to open the door while the tray is descending. The red indicator on the tray loading button blinks while the tray is descending or rising. The light stays on when the tray is down and the door can be safely opened.



- 3** If the LCT is not empty, you can lower the paper tray by pressing the tray loading button located on the left side of the unit.



- 4** Place up to 1,500 sheets in the LCT face-up.



- 5** Close the LCT door. The paper tray rises and positions the top of the stack against the input rollers. When the tray is ready for printing, the indicator light on the tray loading button goes off.

**Note:** When you print using the LCT, make sure to clear the Standard Tray often. A sensor stops operation when the Standard Tray reaches its capacity of 400 sheets.

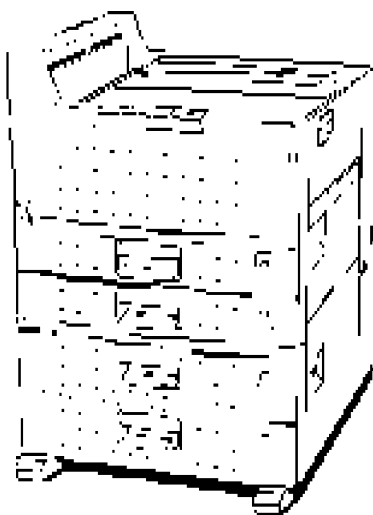
## Paper Bank

The optional Paper Bank consists of two 500-sheet input trays. You can use as supplemental input trays.

### Installing the Paper Bank

Follow the instruction sheet provided with the Paper Bank to install it.

Figure 4-3. Machine with Paper Bank



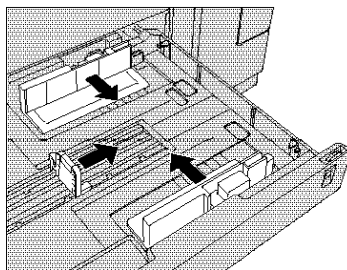
## Using the Paper Bank

The two trays included in the Paper Bank are Tray 3 and Tray 4. Tray 3 is the upper tray and Tray 4 is the lower tray.

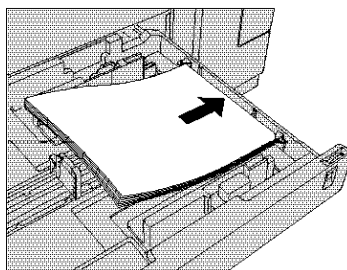
Follow these steps to place paper in either tray of the Paper Bank.

**1** Pull out the paper tray using the recessed handle.

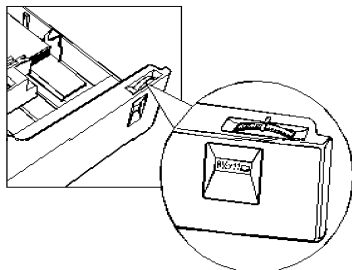
**2** Move the green paper guides to the positions that match the size of the paper you want to load.










**3** Fan a stack of no more than 500 sheets of paper, and place it in the tray. Make sure to place the paper in the tray with the printing side face-down. The package the paper comes in should indicate which is the printing side.



- 4** Set the paper size selection dial on the right edge of the tray to match the size and orientation of the paper you placed in the tray. The following size are shown on the dial.



- |   |  |
|---|--|
| <input type="checkbox"/> <b>A3</b>                   | <input type="checkbox"/> <b>A4</b>  |
| <input type="checkbox"/> <b>F</b>                    | <input type="checkbox"/> <b>A4</b>  |
| <input type="checkbox"/> <b>Letter 11" x 8 1/2"</b>  | <input type="checkbox"/> <b>A5</b>  |
| <input type="checkbox"/> <b>Letter 8 1/2" x 11"</b>  |  |

- 5** If you want to load a paper size not shown in the above list, set the dial to "\*". When the paper size selector is set to "\*", you must enter the special paper size information using the printer Control Panel.

➡ Refer to the "Using the Control Panel" chapter in this manual for instructions on how to enter paper sizes using the Paper Input submenu of the Job Control menu.

- 6** Close the paper tray.

## OUTPUT OPTIONS

The following output options are available.

- ❑ Finisher
- ❑ Duplex Tray
- ❑ Mailbox

### Finisher

The optional Finisher provides the following functions.

- ❑ Job separation
- ❑ Face-up or Face-down printing
- ❑ Stapling

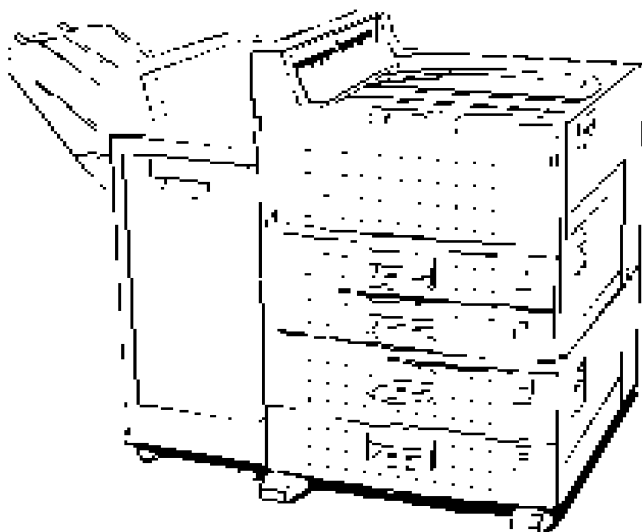
The Finisher Shift Tray can hold up to 1,000 sheets of output and replaces the External Tray.

➡ Refer to the “Specifications” chapter in this manual for specifications on the Finisher.

## Installing the Finisher

Follow the instruction sheet provided with the Finisher to install it.

**Figure 4-4. Machine with Finisher**



## Job Separation

When the Finisher is installed, all print jobs directed to the Finisher are separated using the offset feature. The Finisher activates a jogger mechanism that moves the Shift Tray slightly to the right or left for each job. This makes it easy to determine where the end of a set or job occurs. Job separation is especially useful when separating collated jobs.



## Face-up and Face-down Output

When you print a job using the Finisher, you can select whether you want the printed pages output face-up or face-down to the Shift Tray. You can select face-up (FU) and face-down (FD) output from your application or by using the printer Control Panel.

Select Face-up (FU) output when you print on envelopes, transparencies, labels, or heavy paper. This provides a straighter paper path and helps to prevent paper misfeeds.

**Note:** *Selecting face-up printing outputs pages in reverse order.*

## Stapling

The stapling feature is available when the Finisher is installed. You can select stapling from your application or by using the printer driver. The default setting for stapling is **Off**.

The maximum job size for stapling is 20 pages per set, with a maximum of 30 sets. The stapler locates one diagonal staple at the upper left corner of each set. You can use stapling with duplex jobs and collated jobs using the Disk Based Collation.

**Note:** *The stapling feature can be used only with A4 K or 8½" x 11" K, and when the optional Hard Disk is installed. For stapled output, the Finisher must be set to Face-down output.*

**Note:** *When you select collation using your application, collated sets are not stapled properly. Either the entire job (all sets) is stapled together, or, if the total job size exceeds 20 pages, the job is not stapled at all.*

**Note:** *When you select one of the following output combination, the stapler places staples in an awkward position relative to the printed data:*

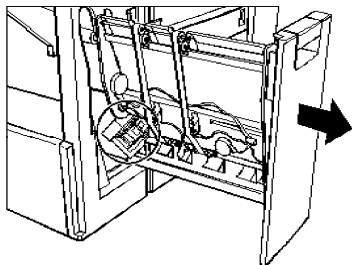
1. Duplex, Short Edge binding, Landscape Orientation
2. Reverse Portrait Orientation, Simplex or Duplex
3. Reverse Landscape Orientation, Simplex or Duplex.

## Replacing the Staple Cartridge

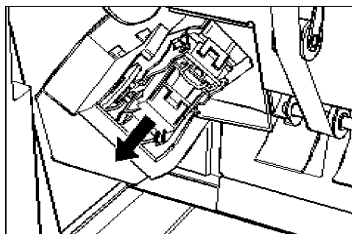
Replace the staple cartridge when “Add Staple Finisher” message appears on the printer Control Panel. Each staple cartridge holds 2,000 staples.

Follow these steps to replace the staple cartridge.

- 1** Use the recessed handle on the Finisher door to pull the Finisher unit out of the Finisher housing.

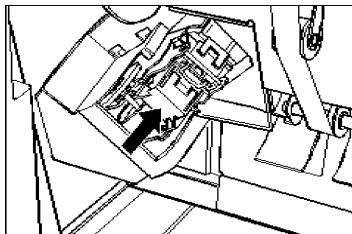


- 2** Remove the empty staple cartridge using the green clips on either side of the cartridge.



- 3** Remove all tape and other packaging material from the new staple cartridge.

- 4** Insert the new cartridge in the bracket and push it in until it snaps into place.



- 5** Push the Finisher unit back into the Finisher housing.

## Duplex Tray

The optional Duplex Tray replaces the top input tray (Tray 1). Use the Duplex Tray to produce two-sided output.

### Installing the Duplex Tray

Follow the instruction sheet provided with the Duplex Tray to install it.

☞ Refer to the “Specifications” chapter in this manual for specifications on the Duplex Tray.

### Using the Duplex Tray

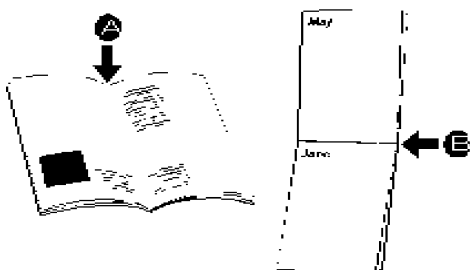
You select duplex printing from your application or by using the printer driver. You can also use the printer Control Panel to select duplex printing.

Before printing a duplex document, you must select one of the following modes.

- ❑ **Short Edge Binding** - When printing in Portrait orientation, use this setting for binding along the top edge of the paper, like a calendar. In Landscape orientation, this setting produces output that can be bound along the left edge of the paper, like a book.
- ❑ **Long Edge Binding** - When printing in Portrait orientation, use this setting for binding along the left edge of the paper, like a book. In Landscape orientation, this setting produces output that can be bound along the top edge of the paper, like a calendar.

Figure 4-5 illustrates the two binding methods.

**Figure 4-5. Binding methods**



**A. Long Edge binding**

**B. Short Edge binding**

**Note:** The Duplex feature does not support certain paper sizes, including A5 K, A6, 5½" x 8½", and envelopes.

## Mailbox

The Mailbox consists of four trays located above the Standard Tray. Each tray has a capacity of 125 sheets. The Mailbox supplements the Standard Tray, and when it is installed, the Standard Tray becomes Output Tray 1, while the trays in the Mailbox become Output Tray 2, Output Tray 3, Output Tray 4, and Output Tray 5.

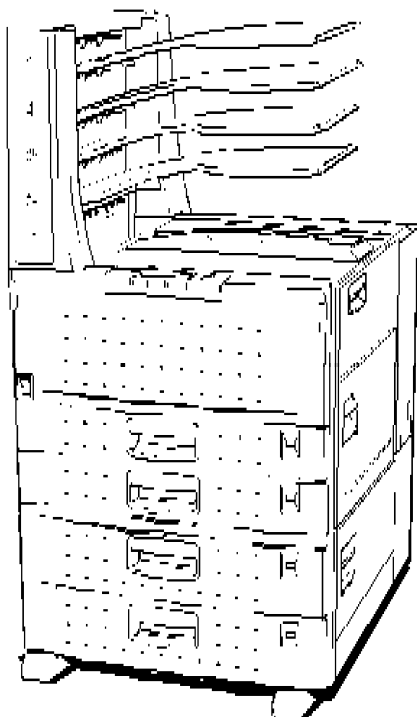
Use the Mailbox to direct output to a specific bin. This feature is useful for separating output by workgroup or project so that picking up printed output is easier.

You can select Mailbox trays from your application or by using the printer driver. You can also select trays using the Control Panel.

## Installation

Follow the instruction sheet provided with the Mailbox to install it.

**Figure 4-6. Machine with Mailbox**



☞ Refer to the “Specifications” chapter in this manual for specifications on the Mailbox.

## Using the Mailbox

The Mailbox directs output to the tray you specify using your application, your printer driver, or the Control Panel. Output trays in the Mailbox are designated as Output Tray 2, Output Tray 3, Output Tray 4, and Output Tray 5. The standard output tray is output Tray 1.



# 5. TROUBLESHOOTING

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## OVERVIEW

This chapter provides information that may be helpful when print quality problems, paper misfeeds, and error messages.

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## PRINTER OPERATIONAL PROBLEMS

This section contains information on the paper misfeed and other problems that may occur, as well as the actions you can take to solve the problems. ➡ Refer to the “Maintaining the Printer” chapter in this manual for further information on basic maintenance tasks (for example, adding toner, paper, and staples).

### Paper Misfeeds

When a paper misfeed occurs while printing is in progress, the printer stops and the “Remove Misfeed <area>” message displays on the Control Panel. When you clear the paper misfeed, the printer recovers and reprints the data that did not print as a result of the misfeed.

When a paper misfeed occurs in the Standard Output Tray, the printer cannot reprint the lost data. If you use the printer Control Panel to enable Jam Recovery, however, the printer recovers and reprints all lost data. ➡ Refer to the “Using the Control Panel” chapter in this manual for information on enabling Jam Recovery.

**Note:** *When Jam Recovery is enabled, the printer can almost always recover all lost pages. If a misfeed occurs in the Stapler the printer cannot reprint lost pages.*

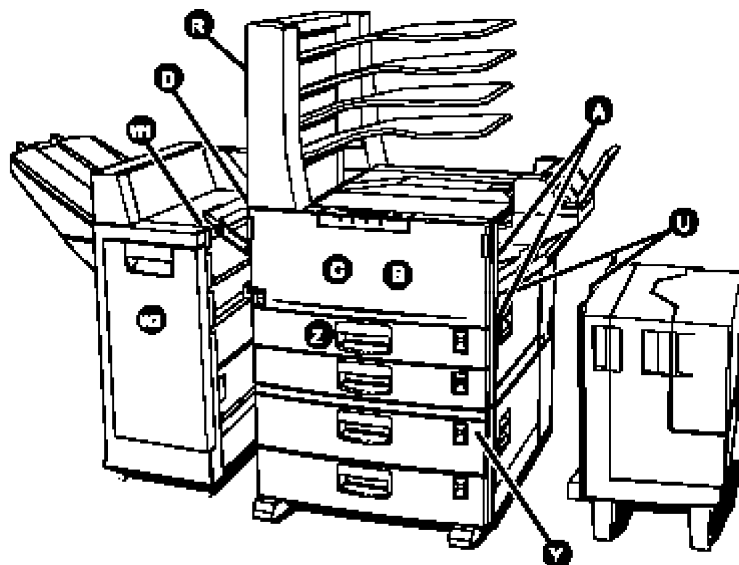


## Clearing Misfeeds

Paper misfeeds can occur in several different areas of the printer.

Figure 5-1 illustrates the areas where paper misfeeds can occur.

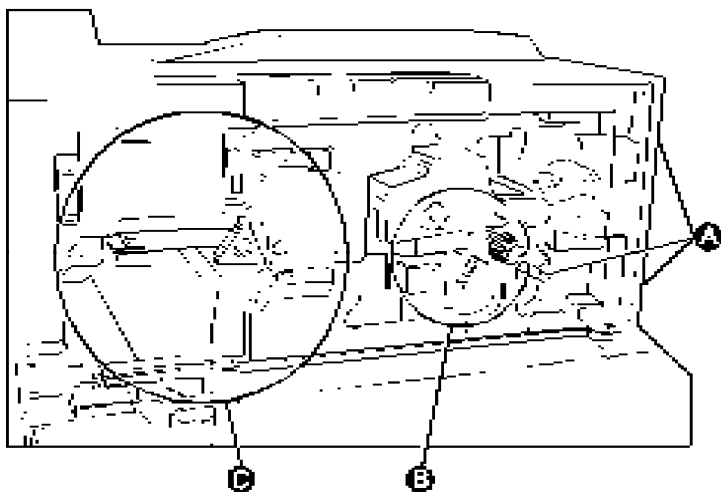
Figure 5-1. Paper misfeed areas



**Note:** Areas B and C are inside the Front Cover.


Figure 5-2 illustrates the areas inside the Front Cover where paper misfeeds can occur.

**Figure 5-2. Front Cover paper misfeed areas**



Whenever you clear a paper misfeed, carefully check for and remove any small, torn, or folded paper fragments.

**Note:** Labels containing instructions on clearing paper misfeeds are available at some paper misfeed locations.

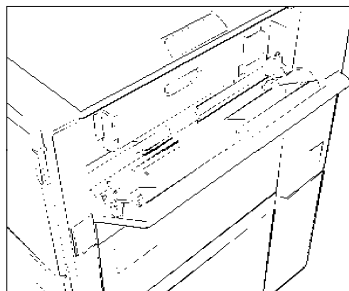
**Warning:** Areas of the printer that marked with the  symbol may be very hot and should not be touched.

## Clearing Misfeeds from Area A

Follow these steps to clear a paper misfed from Area A.

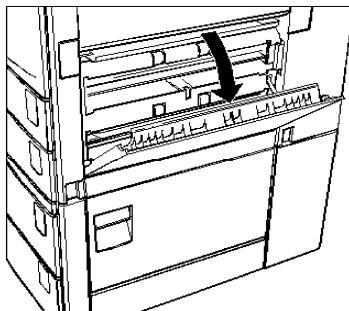
**1** Open Trays 1 and 2 and remove any misfed paper.

**2** When you are printing a job using the By-pass Tray, make sure there is no paper misfed in By-pass Tray.



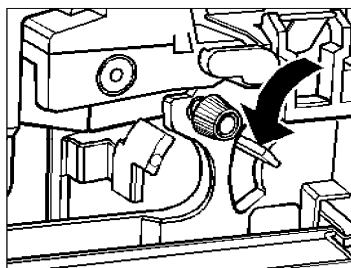
**3** When you are printing a job using the Envelope Feeder, turn off the machine power of the machine, remove the Envelope Feeder, and then remove any misfed envelopes from the By-pass Tray area.

**4** Open the Right Cover and remove any misfed paper from the area inside the cover.



**5** When you are unable to remove misfed paper from any of the misfeed areas, open the Front Cover of the printer.

- 6 Move the blue-edged lever to its lowest position and hold it there. Remove the misfed paper from the By-pass Tray area or the Right Cover area.

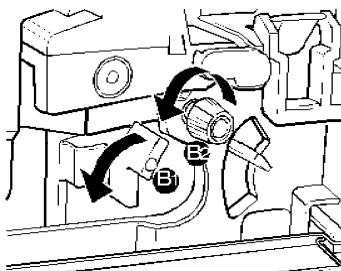


- 7 When necessary, replace the Envelope Feeder, and turn on the machine power.

### Clearing Misfeeds from Area B

Follow these steps to clear a paper misfeed from Area B.

- 1 Open the Front Cover of the printer.
- 2 Move the curved blue lever "B1" down to the left.



- 3 Inspect the area inside the printer and remove any misfed paper.
- 4 Rotate the blue circular knob labeled "B2" counterclockwise to force any misfed paper through the rollers. Remove the paper.

- 5 Raise the “B1” lever back to its original position, locking it into place.
- 6 Close the Front Cover.

**Note:** If the “Remove Misfeed” message remains on the Control Panel, it may mean there is a paper misfeed inside the Fusing Unit (Area C).

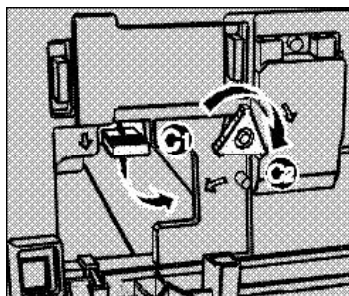
## Clearing Misfeeds from Area C

Follow these steps to clear a paper misfeed from Area C.

**Warning:** Areas of the printer that marked with the ☹ symbol may be very hot and should not be touched.

- 1 Open the Front Cover of the printer.

- 2 Move the blue-edged lever “C1” down to the right.



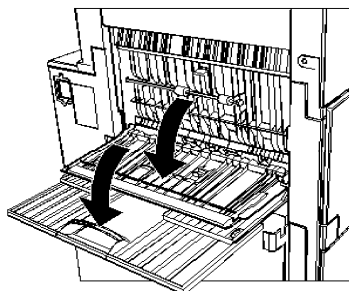
- 3 Rotate the blue triangular knob “C2” clockwise to force any misfed paper through the rollers. Remove the paper.
- 4 Raise the lever “C1” back to its original position. Make sure it is firmly attached to the magnets before you close the Front Cover.
- 5 Close the Front Cover.

**Note:** If the optional Duplex Tray is installed, follow the instructions for Area Z to clear paper misfeeds.

## Clearing Misfeeds from Area D

Follow these steps to clear a paper misfeed from Area D.

- 1 Open the External Tray, and open the Left Cover.



**Note:** When the optional Finisher is installed, you must separate the Finisher from the printer. To perform this task, open the Finisher door, and pull the square locking bar out and up. Move the Finisher away from the printer.

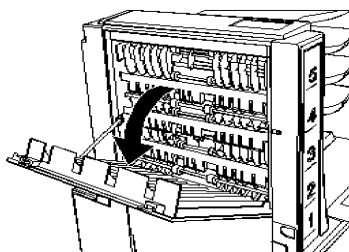
- 2 Remove any misfed paper from the area inside of the Left Cover.
- 3 Close the Left Cover and the External Tray.
- 4 Check the paper exit that leads to the Standard Output Tray (Output Tray 1) for misfed paper.

**Note:** When necessary, reinstall the Finisher when you have removed all the misfed paper and closed the Left Cover and External Tray.

## Clearing Misfeeds from Area R

Follow these steps to clear a paper misfeed from Area R.

- 1 Open the Left door of the Mailbox.



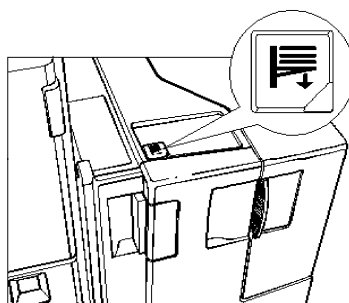
- 2 Remove any misfed paper. Make sure to check the paper exits that lead to the trays of the Mailbox for misfed paper.

- 3 Close the Mailbox door.

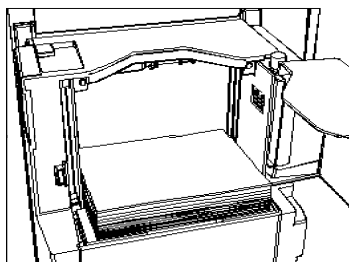
## Clearing Misfeeds from Area U

Follow these steps to clear a paper misfeed from Area U.

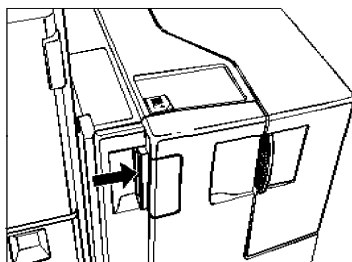
- 1 Press the tray loading button on the LCT.



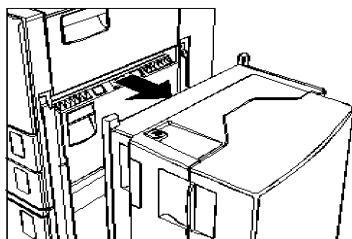
- 2 Open the LCT door, and remove any misfed paper from the paper area.  
Close the LCT door.



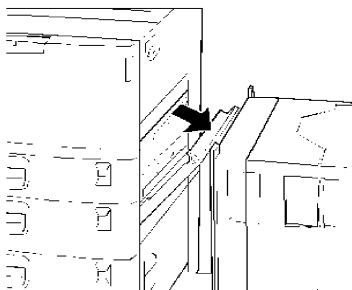
- 3** Push the release button on the LCT.



- 4** Pull out the LCT from the printer.

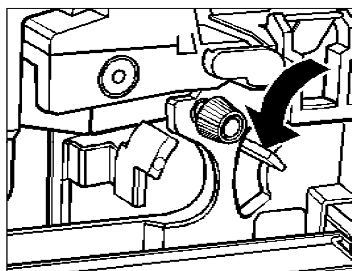


- 5** Open the Right Cover of the printer, and remove any misfed paper.



- 6** When you are unable to remove misfed paper from the area inside the Right Cover, open the Front Cover of the printer.

- 7** Move the blue-edged lever to its lowest position and hold it in place. Remove the misfed paper from the Right Cover area.



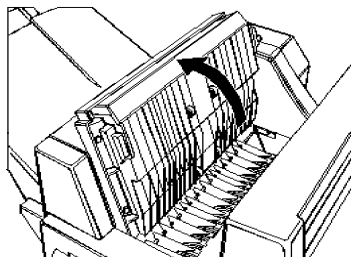
- 8** Move the LCT back into position.



## Clearing Misfeeds from Area W1

Follow these steps to clear a paper misfeed from Area W1.

- 1 Open the Upper Cover of the Finisher.

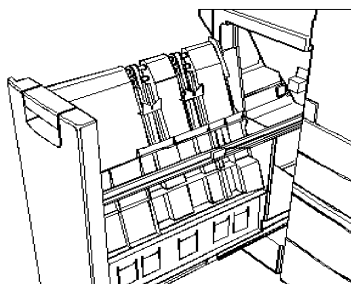


- 2 Remove any misfed paper. Make sure to check the Shift Tray area for misfed paper.
- 3 Close the Upper Cover of the Finisher.

## Clearing Misfeeds from Area W2

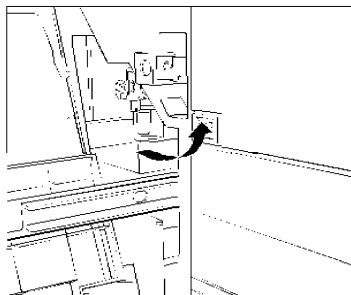
Follow these steps to clear a paper misfeed from Area W2.

- 1 Pull the Finisher unit out of the Finisher housing.



- 2 Check inside of the Finisher for misfed paper.

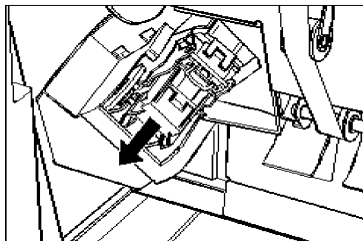
- 3** Move the black lever with the blue sticker up to the right. Remove any misfed paper from the area between the plate and the brush rollers.



- 4** Check the area around the Stapler for misfed staples.

- 5** When you determine that there is a staple misfeed, turn off the machine power before attempting to clear the misfeed.

- 6** Remove the staple cartridge and inspect the area for misfed staples.



- 7** Replace the staple cartridge and turn on the machine power.

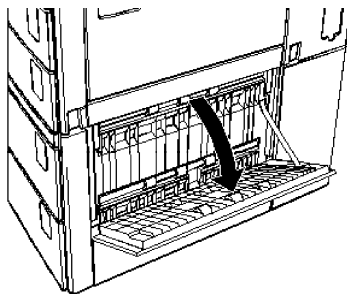
**Note:** When you clear a staple misfeed, stapling is disabled for the remainder of the print job.

- 8** Push the Finisher unit back into the Finisher housing.

## Clearing Misfeeds from Area Y

Follow these steps to clear a paper misfeed from Area Y.

- 1 Open paper trays 3 and 4 and remove any misfed paper.
- 2 Open the right lower cover of the printer.



**Note:** When the optional Large Capacity Tray (LCT) is installed, you must pull the LCT away from the printer. Refer to the “Clearing Misfeed from Area U” section in this chapter for instructions on how to pull out the LCT from the printer.

- 3 Remove any misfed paper from the area inside the right lower cover.
- 4 Close the right lower cover.

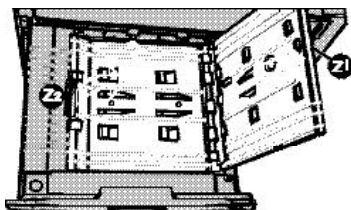
**Note:** When necessary, move the LCT back into position after you remove the misfed paper.

## Clearing Misfeeds from Area Z

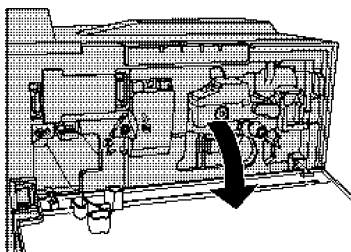
Follow these steps to clear a paper misfeed from Area Z.

**1** Open the Duplex Tray.

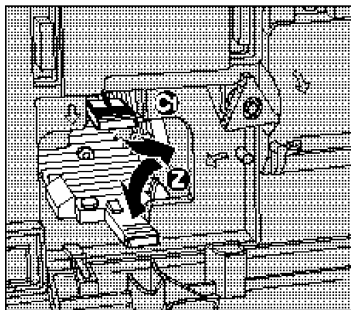
**2** Pull up the handles labeled “Z1” and “Z2” and remove any misfed paper.



**3** Open the Front Cover of the printer.



**4** Move the blue-edged lever “Z” down to the left.

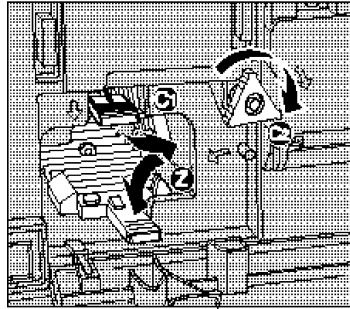


**5** Move the blue-edged lever “C1” down and to the right.

**6** Inspect the area inside the printer and remove any misfed paper.

- 7 Rotate the blue triangular knob "C2" clockwise to force any misfed paper through the rollers, and then remove the paper.

**Note:** When you rotate "C2", check to make sure that "B1" (in area B) comes down.



- 8 Move the lever "C1" up to the right. Make sure it is firmly attached to the magnets.
- 9 Move the lever "Z" up to the left. Make sure it is firmly attached to the magnets.
- 19 Close the Front Cover of the machine and the Duplex Tray.

## Solving Problems

Table 5-1 lists the basic problems that may occur and the actions you can take to solve the problems.

**Table 5-1. Basic problems and their solutions**

Condition	Action
The printer does not activate when the main switch is turned on.	Make sure that the power cord is correctly plugged in to an appropriate power outlet.
The printer is off.	Turn on the main switch.
The printer does not print.	When you are using the printer for the first time, make sure that you correctly removed all of its packaging materials.
The printed image is too light.	Verify that the toner cartridge is positioned correctly. Check for low toner. Verify that toner saving is off.
Stapling does not activate.	Check the stapler for misfed staples. If there is a staple misfeed, remove the misfed staples.  Check if the staple cartridge is empty. If it is, load a new staple cartridge. After loading a new staple cartridge, staples may not be ejected for the first few stapler operations.  Turn over the paper in the feeder tray. If the problem persists, change to a paper stock with less curl.

Table 5-2 lists the printer conditions and the actions you should take to correct them.

**Table 5-2. Printer condition resolution**

Condition	Action
Frequent misfeeds	Verify that the size and weight of the paper you are using meets the paper specifications for the machine. Check if the paper is folded, wrinkled, damp, or curled. Check for the paper in the paper tray correctly. Check for any pieces of misfed paper or other foreign objects. Verify that the page size setting is correct for the paper contained in the feeder tray. Clean or replace the feed roller.
By-pass tray problems	The Load <paper size> By-pass Tray message displays when a print job specifying the By-pass Tray feed is ready to print and the By-pass Tray door is closed. This message repeats when the By-pass Tray runs out of paper.
Print Overrun	Reduce resolution and send the print job again. Turn off Jam Recovery in the Control Panel. Add memory. Reduce resolution setting and the number of the graphics in the page.
Memory Overflow	Reduce resolution and send the print job again. Turn off Jam Recovery in the Control Panel. Add memory. Reduce resolution setting and the number of the graphics in the page.

## TROUBLESHOOTING

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Call your service provider if a printer problem occurs and none of the information available in this section solves the problem. Attempting to repair the printer yourself may void your warranty and cause further damage to the printer. When you call your service provider, make sure to have the following information on hand.

- ❑ A record of the problem that occurred and the steps you took to eliminate it
- ❑ The model number of the printer
- ❑ Printer configuration information
- ❑ Information about the printer driver you are using



# PRINT QUALITY PROBLEMS

Table 5-3 Print quality problems and provides possible solutions.

**Table 5-3. Print quality problems**

Problem	Cause	Action
Printed pages appear dirty (Dirty background)	<p>The paper does not meet the machine's requirements. The conductivity or surface finish may not be suitable.</p> <p>The inside of the machine is dirty. The toner cartridge or PCU may have leaked toner.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Use a different type paper.</li> <li><input type="checkbox"/> Clean inside the machine (including rollers). Refer to the Cleaning in this manual.</li> </ul>
White spots in black image areas/ characters	<p>The paper surface is too rough or is damaged.</p> <p>The paper does not meet the machine's requirements (including unsuitable type of transparencies and envelopes).</p> <p>The transfer roller is installed incorrectly.</p> <p>The transfer roller is dirty, old, or defective.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Use an other paper.</li> <li><input type="checkbox"/> Use a different type of paper.</li> <li><input type="checkbox"/> Check the transfer roller for proper installation. Refer to the Replacing the Transfer Roller Unit for how to install.</li> <li><input type="checkbox"/> Clean the surface of the transfer roller using a blower brush, or replace transfer roller unit. Do not touch the transfer roller surface. Refer to the Replacing the Transfer Roller Unit for how to take out or replace the transfer roller unit.</li> </ul>

**Table 5-3. Print quality problems (continued)**

Problem	Cause	Action
Printed pages appear faded overall or in places	Toner supply is low.	<input type="checkbox"/> Gently rock the toner cartridge back and forth a few times. Refer to the Low Toner Condition .
	Toner Saving Mode is on.	<input type="checkbox"/> Turn Toner Saving.
	The paper does not meet the machine requirement. (including unsuitable type of transparencies and envelopes).	<input type="checkbox"/> Use a different type of paper.
	The transfer roller is installed incorrectly.	<input type="checkbox"/> Check the transfer roller for proper installation. Refer to the Replacing the Transfer Roller Unit for how to install.
	The transfer roller is old or defective.	<input type="checkbox"/> Replace the transfer roller unit. Do not touch the transfer roller surface. Refer to the Replacing the Transfer Roller Unit for how to replace transfer roller unit.
Unexpected printout	The printer driver settings are incorrect.	<input type="checkbox"/> Check that you are using the proper printer driver and settings.
	The printer cable type is incorrect or it is defective.	<input type="checkbox"/> Check that you are using the proper cable, and that it is not defective.
	The personality setting is incorrect.	<input type="checkbox"/> Check the personality setting for the printer driver you are using is correct.
Horizontal black lines on printed pages	The PCU is not installed properly.	<input type="checkbox"/> Check the PCU installation.
	The PCU is damaged.	<input type="checkbox"/> Check for PCU damage. Replace the PCU if damaged.

Table 5-3. Print quality problems (continued)

Problem	Cause	Action
Blank (White) pages	Network configuration may generate a blank page as a print job separate.  The machine is feeding two or more pages at once.	<ul style="list-style-type: none"> <li>❑ Contact the network system administrator.</li> <li>❑ Check that the paper is set in the paper tray correctly. Refer to the Loading Paper for how to set paper.</li> </ul>
The entire print job does not print (No printing)	The printer cable or network cable is connected incorrectly. Software configuration error.  Machine configuration error.	<ul style="list-style-type: none"> <li>❑ Check that the parallel cable and network cable are secure.</li> <li>❑ Check the configuration to make sure that it is set to print the entire job.</li> <li>❑ Check that the printer is in the On-line mode and check for error messages on the Control Panel.</li> <li>❑ Set Parallel and NIC Personality to Auto Sense.</li> </ul>
Repeating patterns (Defects at repeating intervals)	The inside of the machine is dirty. If a roller is dirty with toner, there may occur repetitive defects on the page. The PCU is damaged.  The Fusing Unit is damaged.	<ul style="list-style-type: none"> <li>❑ Clean the inside of the machine. (mainly rollers) Refer to the Cleaning in this manual.</li> <li>❑ Check the PCU. Replace the PCU if damaged.</li> <li>❑ Check the Fusing Unit. Replace the Fusing Unit if damaged.</li> </ul>
Vertical lines	The PCU is damaged.  Fusing Unit is damaged.	<ul style="list-style-type: none"> <li>❑ Check the PCU. Replace the PCU if damaged.</li> <li>❑ Check the Fusing Unit. Replace the Fusing Unit if damaged.</li> </ul>
Easy to remove toner from the printout.(Un-fused image)	The lever on the Fusing Unit is in the lower position to print envelopes.	<ul style="list-style-type: none"> <li>❑ Turn the lever to the upper position (normal paper printing position)</li> </ul>

## NETWORK TROUBLESHOOTING

Table 5-4 lists the network problems that may occur, and the actions you can take to correct them.

**Table 5-4. Network problems**

Problem	Description	Action
Job does not print.	Job does not print from remote host.	<ul style="list-style-type: none"><li>❑ Make sure that all network connections are secure.</li><li>❑ Print the Network Interface Card (NIC) configuration page to determine whether there is a network configuration error. To print the configuration page, turn off power, disconnect the network cable, and turn power back on.</li><li>❑ Verify network settings, such as the IP address, Gateway address, Subnet Mask, printer server name, remote printer name, and frame types.</li><li>❑ Set NIC Personality to Auto Sense.</li></ul>
NIC Fails to Init message prints on the configuration page.	The NIC fails to initialize when the machine is turned on.	<ul style="list-style-type: none"><li>❑ Make sure that the NIC is firmly connected to the machine's controller.</li><li>❑ When the NIC fails consistently, it may be damaged. Replace the NIC.</li></ul>
NIC hang up message prints on the configuration page.	The NIC is no longer active.	<ul style="list-style-type: none"><li>❑ An unrecoverable error has occurred. Turn the power off and back on.</li></ul>

➡ Refer to the *Network Printer Server User Guide* for more detailed information on NIC setup and troubleshooting.

## CONTROL PANEL MESSAGES

This section lists the messages that display on the printer Control Panel, and the actions you can take to resolve the problems described.

Table 5-5 lists the Control Panel messages that display when you start up the printer.

**Table 5-5. Startup status messages**

Message	Description	Action
<b>Self Test</b>	The diagnostic procedure is running.	This message is informational only. No action is required.
<b>Initializing</b>	The printer is initializing.	This informational message displays while the printer is starting up. No action is required.
<b>Warming Up</b>	The printer, or the finisher, is warming up.	This message is informational only. No action is required. Wait until <b>Ready</b> displays on the printer Control Panel before you send data to the printer.
<b>Ready</b>	The printer is ready for data input.	This message is informational only. No action is required. Wait until <b>Ready</b> displays on the printer Control Panel to send data to the printer.
<b>Energy Saver Mode</b>	The printer is in Energy saver mode.	This message is informational only. No action is required. The printer exits Energy saver mode when you press a key, or when you send a print job.

**Table 5-5. Startup status messages (continued)**

<b>NIC resetting Do not turn off</b>	The Network Interface Card (NIC) is completing download of new NIC firmware.	Do not turn off the printer while this message displays.
<b>Formatting Disk</b>	The printer is formatting the Hard Disk. This message displays only when you install a new Hard Disk.	This message is informational only. No action is required.

Table 5-6 lists Control Panel messages that appear during normal printer operation.

**Table 5-6. Operational status messages**

<b>Message</b>	<b>Description</b>	<b>Action</b>
<b>Ready</b>	The machine is ready for data input.	This message is informational only. No action is required.
<b>Waiting</b>	The machine is waiting for additional data.	This message is informational only. No action is required.
<b>Processing</b>	Data is being processed.	This message is informational only. No action is required.
<b>Printing</b>	The machine finished processing the data and is printing the job.	This message is informational only. No action is required.

Table 5-7 lists the Control Panel messages that appear when consumables need replenishing.

**Table 5-7. Consumable messages**

<b>Message</b>	<b>Description</b>	<b>Action</b>
<b>Load &lt;paper size&gt;</b>	The machine is out of the specified paper.	Place the specified paper in any input tray. Make sure to adjust the paper size selection dial, if necessary.  You can force the printer to use the default tray, ignoring the paper size, by pressing the <b>[Esc.]</b> key.

Table 5-7. Consumable messages (continued)

Message	Description	Action
<b>Load &lt;paper size&gt; By-pass Tray</b>	The print job requires the specified paper size in the By-pass Tray.	Place the specified paper size in the By-pass Tray.  You can force the printer to use the default tray, ignoring the paper size, by pressing the <b>[Esc.]</b> key.
<b>Load &lt;envelope size&gt; Envelope Feeder</b>	The print job requires the specified envelope size in the Envelope Feeder.	Place the specified envelope size in the Envelope Feeder.  You can force the printer to use the default tray, ignoring the paper size, by pressing the <b>[Esc.]</b> key.
<b>Load &lt;paper size&gt; LCT</b>	The print job requires the specified paper size in the Large Capacity Tray (LCT).	Place the specified paper size in the LCT.  You can force the printer to use the default tray, ignoring the paper size, by pressing the <b>[Esc.]</b> key.
<b>Load &lt;paper size&gt; Tray &lt;number&gt;</b>	The specified paper tray is empty or the paper is low.	Place paper in the specified tray.  You can force the printer to use the default tray, ignoring the paper size, by pressing the <b>[Esc.]</b> key.
<b>Add Staple Finisher</b>	The Finisher is out of staples.	Replace the staple cartridge.
<b>Add Toner</b>	The machine is almost or completely out of toner.	Redistribute toner in the cartridge.  Replace the toner cartridge.
<b>Change Fusing Unit</b>	You must replace the Fusing Unit.	Replace the Fusing Unit.
<b>Change PCU</b>	You must replace the PCU.	Replace the PCU.

Table 5-8 lists the Control Panel messages that appear while system reports are printing.

**Table 5-8. System report messages**

Message	Description	Action
Printing Error Log	Error log is printing.	This message is informational only. No action is required.
Printing PCL Fonts List	PCL font page is printing.	This message is informational only. No action is required.
Printing PS Fonts List	PostScript® font page is printing.	This message is informational only. No action is required.
Printing System Config	System configuration page is printing.	This message is informational only. No action is required.



Table 5-9 lists the Control Panel messages that appear when you must take corrective action.

**Table 5-9. Operator attention messages**

Message	Description	Action
<b>Close Finisher Upper Cover</b>	The Finisher Cover is open.	Close the Finisher Upper Cover.
<b>Close Finisher Front Cover</b>	The finisher Front Cover is open.	Close the Finisher Front Cover.
<b>Close Front Cover</b>	The Front Cover is open.	Close the Front Cover.
<b>Close Left Cover</b>	The Left Cover is open.	Close the Left Cover.
<b>Close LCT Cover</b>	The Cover of the Large Capacity Tray (LCT) is open.	Close the LCT Cover.
<b>Close Mailbox Cover</b>	The Cover of the Mailbox is open.	Close the Mailbox Cover.
<b>Close Right Cover</b>	The Right Cover is open.	Close the Right Cover.
<b>Close Right Lower Cover</b>	The Lower Cover is open.	Close the Right Lower Cover.
<b>Reset Env Feeder or Power off/on</b>	The envelope feeder was removed with the printer power on.  The printer engine must be reset.	Reset the Envelope Feeder, or turn the printer power off and back on.
<b>Resetting Job</b>	You pressed the <b>[Esc.]</b> key to cancel a print job. The printer terminates the current job and enters Menu mode.	This message is informational only. No action is required.
<b>Reset Duplex tray</b>	The Duplex Tray is open.	Push the Duplex Tray into the printer.
<b>Reset LCT</b>	The Large Capacity Tray (LCT) is detached from the printer.	Make sure the LCT is not pulled away from the printer.
<b>Reset Paper tray &lt;number&gt;</b>	The specified paper tray is not ready.	Make sure the tray is not open.
<b>Reset Fusing Ut</b>	The Fusing Unit is removed or not installed correctly.	Install the Fusing Unit or verify that the existing Fusing Unit is installed correctly.

Table 5-9. Operator attention messages (continued)








Message	Description	Action
<b>Remove Env Feeder or Power off/on</b>	The envelope feeder was removed with the printer power on.	Remove the Envelope Feeder, or turn the printer power off and back on.
<b>Remove Misfeed &lt;area&gt;</b>	There is a paper misfeed in the specified area.	Remove the misfeed paper from the specified area.
<b>Remove Paper Output Tray &lt;number&gt;</b>	The specified output tray in the Mailbox is full.	Remove the output from the Mailbox.
<b>Remove Paper Shift Tray</b>	The Shift Tray is full.	Remove the output from the Shift Tray.
<b>Remove Paper Standard Tray</b>	The Standard (output) Tray is full.	Remove the output from the Standard (output) Tray.
<b>Open External Tray</b>	The External Tray is closed, and the job requires the External Tray.	Open the External Tray.
<b>Paper Size Error Tray &lt;number&gt;</b>	<p>The paper size selection dial on the specified tray is not in the correct position.</p> <p>If the paper size selection dial is set to the * position, and this message displays, the paper size you entered using the Control Panel may be different from the paper you placed in the tray.</p>	<p>Replace the existing paper with paper that matched the paper size indicated on the dial or entered using the Control Panel. The correct size paper in the wrong orientation will also cause a paper size error. If the desired paper is placed in the tray, but the size is entered incorrectly in the Control Panel, you must cancel the print job, enter the correct size in the Control Panel and restart the job.</p> <p>Press the [  /  ] key to continue the print job.</p>
<b>Press Escape to cancel this job</b>	You pressed the [  ] key while the system was processing data.	<p>Press the [Esc.] key when you want to terminate the current job. The printer may print a few pages after you press the [  /  ] key. Press the [  ] key again to enter the Menu Mode.</p> <p>Press the [  ] key again to continue the current job.</p>

Table 5-10 lists the Control Panel messages that appear when a serious failure occurs and maintenance is required.

**Table 5-10. System failure messages**

Message	Description	Action
<b>Call Service</b> <b>SC&lt;number&gt;</b>	The Service Code or SC number identifies the failure.	Call service. Tell the SC number.
<b>Self Test</b> <b>SC&lt;number&gt;</b>	The printer has encountered an error during the diagnostic procedure.	Call service. Tell the SC number.
<b>SIMM MEMORY Err</b> <b>SIMM 1(2)</b>	An error occurred reading from or writing to a DRAM SIMM.	Remove and reset the SIMM. Remove and replace the SIMM.



## 6. SPECIFICATIONS

# PRINTER

This section contains the electrical and hardware specifications for your printer, including information on the hardware and software options. It also provides information on the output capabilities of the printer.

## Electrical and Hardware Specifications

This section contains the electrical and hardware specifications for your printer, including information on optional equipment. Table 6-1 lists the basic printer information and specifications.

**Note:** All specifications are subject to change without notice.

**Table 6-1. Basic printer information**

Component	Specification
<b>Resolution</b>	600 dots per inch (dpi) standard 400 dpi available when the Tiff or the PostScript® option is installed 300 dpi simulated by doubling pixel size at 600 dpi resolution 200 dpi simulated by doubling pixel size at 400 dpi resolution
<b>Gray scale</b>	Up to 256 levels
<b>Paper weight</b>	Tray 1 and 2 - 60 to 90 g/m <sup>2</sup> (16 to 24 lb) By-pass tray - 60 to 157 g/m <sup>2</sup> (16 to 42 lb)
<b>Paper capacity</b>	Trays 1 and 2 - 250 sheets or less than 27 mm (1.04") By-pass tray - 100 sheets or less than 10 mm (0.4")
<b>Printing speed</b>	25 pages per minute (ppm) (Letter or A4)
<b>Toner replacement</b>	Cartridge exchange
<b>Power source</b>	120V, 60Hz, more than 9.0A (U.S. and Canada) 220V, 50Hz, more than 4.5A (Europe)
<b>Power consumption</b>	Energy saver mode - less than 45 watts (W) Maximum - 950 W
<b>Noise emissions</b>	Printer: Stand-by, 40 dB(A); printing, 64 dB(A) Printer with all accessories: Stand-by, 40 dB(A); printing - 68 dB(A) The measurements are made according to ISO 9296 at the operator position.

Table 6-1. Basic printer information (continued)

Component	Specification
<b>Standard bi-directional parallel interface</b>	Standard 36-pin parallel cable and a parallel port available on the host computer. Do not use a parallel cable longer than 3 meters (10 feet).
<b>Printer options</b>	Paper Bank (1,000-sheet 2-tray unit) Large capacity tray (LCT) (1,500-sheet tray) Duplex Tray Finisher Envelope Feeder Mailbox PostScript® kit Hard Disk Network Interface Card

Table 6-2 lists the printer size specifications.

Table 6-2 Printer size

Component	Width	Depth	Height
<b>Printer without accessories</b>	530 mm 20.9"	625 mm 24.6"	472 mm 18.6"
<b>Printer with LCT, Paper Bank and Finisher</b>	1345 mm 53.0"	625 mm 24.6"	790 mm 31.1"
<b>Printer with Mailbox and Paper Bank</b>	530 mm 20.9"	625 mm 24.6"	1080 mm 42.5"

Table 6-3 lists the printer weight specifications.

Table 6-3. Printer weight

Component	Weight
<b>Printer with paper cassette, PCU, and Toner Cartridge</b>	45 kg 99 lb

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Table 6-4 lists the optional printer equipment specifications.

**Table 6-4. Optional equipment**

Component	Specification
<b>Paper Bank</b>	Paper weight: 60 to 90 g/m <sup>2</sup> (16 to 24 lb) Paper capacity: 1,000 sheets (500 sheets of 80 g/m <sup>2</sup> per tray) Power source: DC 24V, 5V (from printer) Power consumption: 15 W (average) to 30 W (maximum) Weight: 23kg, 50.7 lb Dimensions (W x D x H): 530 x 605 x 327 mm / 20.9" x 23.8" x 12.9"
<b>LCT</b>	Paper weight: 60 to 90 g/m <sup>2</sup> (16 lb to 24 lb) Paper capacity: 1,500 sheets (500 sheets of 80 g/m <sup>2</sup> per tray) Power source: DC 24V, 5V (from printer) Power consumption: 22.1 W (average) to 40 W (maximum) Weight: 13 kg, 28.7 lb Dimensions (W x D x H): 290 x 440 x 545 mm / 11.4" x 17.3" x 21.5"
<b>Envelope Feeder</b>	Envelope weight: 70 to 100 g/m <sup>2</sup> (18.7 to 26.7 lb) Envelope capacity: 100 envelopes Power source: DC 24V, 5V (from printer) Power consumption: 20 W Weight: 1.3 kg, 2.7 lb Dimensions (W x D x H): 267 x 167 x 172 mm / 10.5" x 6.6" x 6.8"
<b>Duplex Tray</b>	Paper weight: 60 to 90 g/m <sup>2</sup> (16 to 24lb) Paper source: DC 24V, 5V (from printer) weight: 5.2 kg, 11.5lb Dimensions (W x D x H): 514 x 450 x 77 mm / 20.3" x 17.7" x 3.1"
<b>Finisher</b>	Staple position: One diagonal staple in the upper left corner Staple replenishment: Cartridge exchange (2,000 staples per cartridge) Stapler capacity: 20 sheets per set, up to 30 sets Power source: DC 24V, DC 5V (from printer) Power consumption: 60 W Weight: 28 kg, 62 lb Dimensions (W x D x H): 520 x 550 x 750 mm / 20.5" x 21.7" x 29.6"
<b>Mailbox</b>	Paper weight: 60 to 90 g/m <sup>2</sup> (16 to 24 lb) Paper capacity: 125 sheets per tray Power source: DC 24V, 5V (from printer) Power consumption: 20 W Weight: 7 kg, 15.4 lb Dimensions (W x D x H): 465 x 490 x 370 mm / 18.3" x 19.3" x 14.6" (installed) 465 x 490 x 405 mm / 18.3" x 19.3" x 16" (uninstalled)
<b>PostScript® capability</b>	Expansion PostScript® ROM Dual Inline Memory Module (DIMM) installed in the PostScript® ROM DIMM socket.



Table 6-4. Optional equipment (continued)

<b>Hard Disk</b>	Storage capacity: 815 megabytes (MB) Interface: Enhanced IDE plugs into Printer Controller Power Source: DC 5V, from Printer Controller Dimensions (W x D x H): 70 x 100 x 8.45 mm / 2.75" x 3.9" x 0.3"
<b>Network interface Card</b>	Required Ethernet or Token Ring card installed in the expansion Input/Output (I/O) slot on the printer to connect to an Ethernet or Token Ring network. ➡ Refer to <i>Network Printer Server User Guide</i> for further information on the network connection.

## Printer Capabilities

This section contains information on the functionality of the printer trays as well as information and illustrations on the output capabilities of the printer.

### Tray Functionality

This section contains information on the functionality of the standard output tray, the external output tray, the optional Finisher, and the optional Mailbox.

The standard (top) output tray provides the following functionality:

- ❑ Face-down only
- ❑ Simplex or Duplex output
- ❑ Disk Based Collation (available only when the hard disk is installed).

The External tray provides the following functionality:

- ❑ Face-up only
- ❑ Simplex or Duplex output
- ❑ Disk Based Collation (available only when the hard disk is installed).

The optional Finisher provides the following functionality:

- ❑ Face-up or Face-down output
- ❑ Simplex or Duplex output
- ❑ Disk Based Collation (available only when the hard disk is installed)
- ❑ Job separation (performed by the jogger mechanism)
- ❑ Stapling (available only when the hard disk is installed)

## SPECIFICATIONS

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**Note:** *Stapling is available only when you select Face-down output.*

The optional Mailbox provides the following functionality:

- ❑ Face-down output
- ❑ Simplex or Duplex output
- ❑ Disk Based Collation (available only when the Hard Disk option is installed)

Figure 6-1 shows the single copy output capabilities of the printer.

**Figure 6-1. Output capabilities (single copy)**

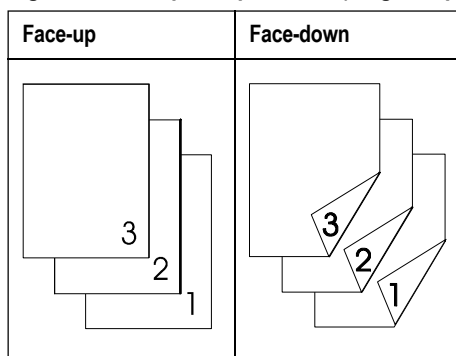




























Table 6-5. Input paper size handling

Paper Name	Size	Input Trays				
		Tray 1,2	Paper Bank Tray 3,4	By-pass Tray	Envelope Feeder	Large Capacity Tray
A3 	297 x 420 mm	Y <sup>2</sup>	Y	Y <sup>1</sup>	N	N
B4 	257 x 364 mm	Y <sup>2</sup>	Y	Y <sup>1</sup>	N	N
A4 	210 x 297 mm	Y	Y	Y <sup>1</sup>	N	N
A4 	297 x 210 mm	Y	Y	Y <sup>1</sup>	N	Y
B5 	182 x 257 mm	Y <sup>2</sup>	Y	Y <sup>1</sup>	N	N
B5 	257 x 182 mm	Y <sup>2</sup>	Y	Y <sup>1</sup>	N	N
A5 	148 x 210 mm	N	N	Y <sup>1</sup>	N	N
A5 	210 x 148 mm	Y <sup>2</sup>	Y	Y <sup>1</sup>	N	N
A6 	105 x 148 mm	N	N	Y <sup>1</sup>	N	N
Ledger 	11" x 17"	Y	Y	Y <sup>1</sup>	N	N
Legal 	8½" x 14"	Y	Y	Y <sup>1</sup>	N	N
Foolscap 	8½" x 13"	Y	Y	Y <sup>1</sup>	N	N
Letter 	8½" x 11"	Y	Y	Y <sup>1</sup>	N	N
Letter 	11" x 8½"	Y	Y	Y <sup>1</sup>	N	Y
Executive 	7¼" x 10"	Y <sup>2</sup>	Y	Y <sup>1</sup>	N	N
Executive 	10" x 7¼"	Y <sup>2</sup>	Y	Y <sup>1</sup>	N	N
Halfletter 	5½" x 8½"	N	N	Y <sup>1</sup>	N	N
Folio 	8¼" x 13"	Y <sup>2</sup>	Y	Y <sup>1</sup>	N	N
F/GL 	8" x 13"	Y <sup>2</sup>	Y	Y <sup>1</sup>	N	N
C5 Env 	162 x 229 mm	N	N	Y <sup>1</sup>	Y <sup>1</sup>	N
DL Env 	110 x 220 mm	N	N	Y <sup>1</sup>	Y <sup>1</sup>	N
C6 Env 	114 x 162 mm	N	N	Y <sup>1</sup>	Y <sup>1</sup>	N
COM 10 Env 	4⅞" x 9½"	N	N	Y <sup>1</sup>	Y <sup>1</sup>	N
Monarch Env 	3⅞" x 7½"	N	N	Y <sup>1</sup>	Y <sup>1</sup>	N
Custom Size	(90-297) x (148-432) mm	N	N	Y <sup>3</sup>	N	N

























 Y-indicates that the paper may be used in this tray or device.

 N-indicates that the paper may not be used in this tray or device.

 Refer to the Notes at the end of the table 6-6 for Y<sup>1</sup>, Y<sup>2</sup> and Y<sup>3</sup>.

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**Table 6-6. Output paper size handling**

		Output Trays						
Paper Name	Size	Duplex	Shift Tray	External Tray	Mail Box	Shift Tray		Staple
						Face-up	Face-down	
A3 	297 x 420 mm	Y	Y	Y	Y	Y	Y	N
B4 	257 x 364 mm	Y	Y	Y	Y	Y	Y	N
A4 	210 x 297 mm	Y	Y	Y	Y	Y	Y	N
A4 	297 x 210 mm	Y	Y	Y	Y	Y	Y	Y
B5 	182 x 257 mm	Y	Y	Y	Y	Y	Y	N
B5 	257 x 182 mm	Y	Y	Y	Y	Y	Y	N
A5 	148 x 210 mm	N	N	Y	N	N	N	N
A5 	210 x 148 mm	Y	Y	Y	Y	Y	Y	N
A6 	105 x 148 mm	N	N	Y	N	N	N	N
Ledger 	11" x 17"	Y	Y	Y	Y	Y	Y	N
Legal 	8½" x 14"	Y	Y	Y	Y	Y	Y	N
Foolscap 	8½" x 13"	Y	Y	Y	Y	Y	Y	N
Letter 	8½" x 11"	Y	Y	Y	Y	Y	Y	N
Letter 	11" x 8½"	Y	Y	Y	Y	Y	Y	Y
Excutive 	7¼" x 10"	Y	Y	Y	Y	Y	Y	N
Excutive 	10" x 7¼"	Y	Y	Y	Y	Y	Y	N
Halfletter 	5½" x 8½"	N	N	Y	N	N	N	N
Folio 	8¼" x 13"	Y	Y	Y	Y	Y	Y	N
F/GL 	8" x 13"	Y	Y	Y	Y	Y	Y	N
C5 Env 	162 x 229 mm	N	N	Y	N	N	N	N
DL Env 	110 x 220 mm	N	N	Y	N	N	N	N
C6 Env 	114 x 162 mm	N	N	Y	N	N	N	N
COM 10 Env 	4⅞" x 9½"	N	N	Y	N	N	N	N
Monarch Env 	3⅞" x 7½"	N	N	Y	N	N	N	N

**Notes: (for the Table 6-5)**

Y<sup>1</sup> The paper size must be entered using the Control Panel.

Y<sup>2</sup> The paper size selection dial must be set to "p". The paper size must be entered using the Control Panel.

Y<sup>3</sup> Custom paper dimensions must be entered using the Control Panel.

## Parallel Interface

The parallel connection is a bi-directional parallel interface and requires a standard 36-pin parallel cable and a parallel port available on the host computer. Do not use a parallel cable longer than three meters (ten feet).

Table 6-7 lists the parallel pin designations and associated signals.

**Table 6-7. Parallel pin designations**

Code	Signal	Pin
STROBE	Strobe	1
D<0>	Data	2
D<1>	Data	3
D<2>	Data	4
D<3>	Data	5
D<4>	Data	6
D<5>	Data	7
D<6>	Data	8
D<7>	Data	9
ACK*	Acknowledge	10
BUSY	Busy	11
PE	Paper Error	12
SEL	Select Out	13
AUTOFD*	Auto Feed	14
(N/C)	(Not Connected)	15
GND	Ground	16
GND	Ground	17
+5 VDC	5 Volts Direct Current	18
GND	Ground	19
GND	Ground	20
GND	Ground	21
GND	Ground	22
GND	Ground	23
GND	Ground	24
GND	Ground	25
GND	Ground	26
GND	Ground	27
GND	Ground	28
GND	Ground	29
GND	Ground	30
INIT*	Initialization	31
FAULT*	Fault	32
(N/C)	(Not Connected)	33
(N/C)	(Not Connected)	34
(N/C)	(Not Connected)	35
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# Network Interface

You can connect your printer to a network using a Network Interface Card. ➡ Refer to the “Using the Options” chapter in this manual for more information on the network interface.

---

## MEDIA

This section contains the guidelines you use to select paper and other print media for your printer. To ensure satisfactory printing results, use only paper and transparencies designed for use with laser printers.

**Note:** *Make sure that any paper you use is free of wrinkles, rips, dust and oil residue. Using print media that do not meet the media guidelines contained in this section can cause poor quality output, frequent paper misfeeds, operating problems, and possibly damage to your printer.*

## Media Guidelines

Follow the guidelines listed in this section to determine the type of media you want to use for your print jobs.

### Paper

- ❑ For best results, use standard, high quality white paper designed for copiers or laser printers.
- ❑ Use only high quality color paper designed for laser printers. Make sure that the color was added to the paper during the paper creation process. Verify that the color can withstand the temperatures generated by the printer (200 degrees Celsius or 392 degrees Fahrenheit).
- ❑ Make sure that the paper weight is between 60 and 90 gsm (16 and 24 lb). You can use paper up to 412 gsm (110 lb) in the By-pass Tray.
- ❑ When using preprinted forms, make sure that the forms were printed with heat-resistant inks that can withstand the temperatures generated by the printer (200 degrees Celsius or 392 degrees Fahrenheit).

**Label**

- ❑ Use only labels designed for laser printers.
- ❑ Make sure that the label adhesive can withstand the temperatures generated by the printer (200 degrees Celsius or 392 degrees Fahrenheit).
- ❑ When you use a sheet of labels, make sure that the labels cover the entire page and that no adhesive is exposed.

**Transparencies**

Use only transparencies designed for laser printers.

**Envelopes**

- ❑ Use envelopes with a maximum paper weight of 90 gsm (24 lb).
- ❑ Make sure that the envelope adhesive can withstand the temperatures generated by the printer (200 degrees Celsius or 392 degrees Fahrenheit).

Do not use envelopes with windows or clasps.

### Media Tips

Keep the following tips in mind when selecting and using paper with your printer:

- ❑ When using the printer, you should avoid the following types of media:
  - ◆ Very slick or shiny paper
  - ◆ Coated paper
  - ◆ Highly textured or rough paper
  - ◆ Paper with cutouts or perforations larger than 8 mm
  - ◆ Folded, curled, creased, or damaged paper
  - ◆ Thin paper
  - ◆ Stapled paper
  - ◆ Paper that is wrinkled, nicked, or damaged
  - ◆ Paper containing fasteners, windows or synthetic material
  - ◆ Multiple part forms
  - ◆ Paper that was processed using low temperature dyes
  - ◆ Thermal paper (art paper)
  - ◆ Adhesive labels with bubbles, wrinkles or other signs of peeling.
- ❑ Place paper in the 250-sheet and 500-sheet trays with the printing side face-down, and in the large capacity tray (LCT) with the printing side face-up.
- ❑ Fan the paper before you place it in the printer.



- Use the following paper in the By-pass Tray only:
  - ◆ Adhesive labels
  - ◆ Overhead projector transparencies
  - ◆ Postcards
  - ◆ Paper heavier than 28 lbs (105 gsm)
  - ◆ Translucent paper.
  
- Follow these paper storage guidelines:
  - ◆ Do not store paper where it is exposed to heat.
  - ◆ Store the paper on a flat surface.
  - ◆ Use older paper stock first.
  - ◆ Do not lay heavy objects on the paper.
  - ◆ Keep open reams of paper in the package and store as you would unopened paper.
  - ◆ Avoid storing paper in humid areas.
  - ◆ Store paper in a vinyl bag in high temperature and high humidity, or in low temperature and low humidity conditions.

## SPECIFICATIONS





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## Note to users in the United States of America

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Warning

*Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.*

## Caution

*Properly shielded and grounded cable and connector must be used for connection to host computer in order to meet FCC Emission limits.*

## DECLARATION OF CONFORMITY

Product Name: Ricoh Printer Model Number: Aficio MP01

This device complies with part 15 of FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
  - (2) This device must accept any interference received, including interference that may cause undesired operation.
- Ricoh Corporation, 5 Dedrick Place, West Caldwell, NJ 07006  
201-882-2000

## Note to users in Canada

The Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

## Remarque concernant les utilisateurs au Canada.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

**Note:** *This product contains optional Token Ring Interface Card. When using the Token Ring Interface Card, the product meets the requirements of FCC rules Part 15 Class A and Canadian Interference-Causing Equipment Regulations Class A. For Class A information, see User Guide provided with the Token Ring Card.*

**Remarque:** *Ce produit contient la Carte Interface Son Symbolique facultatif. Quand la Carte Interface Son Symbolique est utilisée, ce produit conforme aux conditions des règlements FCC 15ème Partie Class A et les Réglementations Class A Équipement Effet - Interférence Canadiennes. Pour les renseignements Class A, voir le Guide Utilisateur fourni avec la Carte Son Symbolique.*



### Declaration of Conformity

"The product complies with the requirements of the EMC Directive 89/336/EEC and the Low Voltage Directive 73/23/EEC"

**Note:** *This product contains optional Token Ring Interface Card. When using the Token Ring Interface Card, the product meets the requirements of EN55022 Class A. For Class A information, see User Guide provided with the Token Ring Card.*

In accordance with ISO Standard 7001, this machine uses the following symbols for the main switch:

I means POWER ON

O means POWER OFF

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